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NYASALAND



PROTECTORATE



Annual Report of the Medical Department for the year 1952

SECTION I. ADMINISTRATION

A. Staff

1. Dr. P. W. Dill Russell, M.R.C.S., L.R.C.P., Deputy Director of Medical Services, was appointed Director of Medical Services, Cyprus, and left Nyasaland in June on leave, prior to taking up his new appointment.

2. Dr. E. H. Murcott, M.D., D.P.H., formerly Assistant Director of Medical Services, Kenya, was appointed Deputy Director of Medical Services and assumed duty during December.

3. Dr. W. A. Glynn, M.R.C.S., L.R.C.P., D.P.H., Senior Medical Officer, acted as Deputy Director of Medical Services from June until December.

4. Dr. H. I. Goodall, M.B., Ch.B., acted as Pathologist during the absence on leave of Dr. R. B. Baird.

5. Dr. J. Tillman, M.B., Ch.B., Senior Medical Officer, went on leave, pending retirement, during February.

6. Dr. R. Park, B.A., M.R.C.S., L.R.C.P., D.P.H., D.T.M. & H., Medical Officer, was promoted to the rank of Senior Medical Officer and assumed duty as Provincial Medical Officer, Southern Province, during August.

7. Dr. A. C. B. Singleton, M.B., Ch.B., D.T.M. & H., D.P.H., Medical Officer, arrived on transfer from Kenya during April; he assumed duty as Provincial Medical Officer, Northern Province, in December.

8. The following first appointments were made during the year:—

Dr. J. W. D. Eberlie, M.B., B.CHIR., M.R.C.P., Special Grade Medical Officer.

Dr. R. M. Mitchell, M.B., Ch.B., F.R.F.P.S. (Glas.), Special Grade Medical Officer.

Dr. J. S. Clark, M.B., B.S., Medical Officer.

Dr. A. Holmes, M.B., Ch.B., Medical Officer.

Dr. I. R. Waters, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Medical Officer.

9. Dr. J. O. Creighton, M.R.C.S. (Eng.), L.R.C.P. (Lond.), went on leave, pending resignation, and Dr. S. H. Kryszek, M.B., Ch.B., went on leave on the completion of his contract.

10. Mr. R. Meintjes, M.R.SAN.I., I.M. & F. (R.S.I.) Trop. Hygiene, R.S.I., was appointed Health Inspector during January.

11. Seven Nursing Sisters arrived on first appointment; there was one resignation on account of marriage and two Nursing Sisters left on transfer to other territories.

12. The following Senior Hospital Assistants were promoted to posts in the Executive Division of the African Civil Service.

A. T. M. Mkisi,

K. W. Mkandawire,

E. D. Sisya,

B. Kulemeka,

P. Kamange.

Eight other Hospital Assistants and two Medical Aides were promoted to higher grades.

13. Mr. F. Mphonde was promoted to Class I of the African Civil Service on his appointment to the Sanitary Assistants' School as Senior African Instructor. One Sanitary Assistant was promoted to an higher grade.

Post Graduate Courses

14. Dr. R. Park, B.A., M.R.C.S., L.R.C.P., D.T.M. & H., obtained the D.P.H. of Edinburgh University.
15. Dr. A. C. B. Singleton, M.B., Ch.B., D.T.M. & H., obtained the D.P.H. of Edinburgh University.
16. Dr. E. Robinson, M.B., Ch.B., obtained the T.D.D. of Cardiff University.

B. Ordinances and Subsidiary Legislation

17. Ordinances

The Medical Practitioners and Dentists Registration (Amendment) Ordinance, 1952. Sections 9 and 10 of the principal Ordinance were amended to permit of the licensing of medical practitioners and dentists in possession of professional qualifications which are recognized in the country in which they were obtained, but which are not registerable in Nyasaland. A licence to practise may now be granted on condition that such practitioners are solely employed in *bona fide* medical missionary work in the Protectorate. This measure brings the Nyasaland legislation into line with that of neighbouring territories in the Southern African region.

18. Government Notices

(a) Government Notices No. 14 and 15 respectively revise the Rules of Chiromo and Port Herald Sanitary Boards and increase the fees payable for sanitary services.

(b) Government Notice No. 59 amends sub-rule (1) of Rule 6 of the Poison Rules by deleting "penicillin" and inserting "Antibiotics, penicillin, streptomycin, aureomycin, chloramphenicol, terramycin, neomycin and all similar substances (a) produced by the metabolism of lower organisms, or (b) of the type generally known as antibiotics, their derivatives and preparations of their derivatives." It also adds to Group II of the Second Schedule: "Antibiotics, ointments, pastes, surgical dressings".

(c) Government Notice No. 60 amends Part I of the Poisons List (Confirmation) Order by adding "Antibiotics" in conformity with General Notice No. 59.

(d) Government Notices No. 61 and 62 define the boundaries and appoint a Sanitary Board for the Visanza Sanitary Area.

(e) Government Notice No. 118 defines the boundaries of Lilongwe European Public Cemetery.

(f) Government Notice No. 137 lays down the Rules for Mzimba Sanitary Board.

(g) Government Notice No. 149 amends the Midwives Rules, 1947, by adding to the Syllabus of Training a Syllabus of Training Part II for the training of Midwives Class II.

(h) Government Notice No. 150 prescribes the Diploma of Medicine (East Africa) of Makerere College as a medical qualification for the purposes of subsection (1) of section 15 of the Medical Practitioners and Dentists Registration Ordinance, 1946.

(i) Government Notice 165 cites the Air Navigation (General) Regulations, 1952. Regulations 168 to 193 lay down the medical, physical, visual, colour perception and hearing requirements for the licensing of members of aircraft operating crews.

(j) Government Notice No. 171 abolishes the Cholo Sanitary Board.

(k) Government Notices No. 172, 173 and 174 define the boundaries, apply the Sanitary Board Rules and appoint a Sanitary Board for the Bandanga Trading Centre Sanitary Area.

(l) Government Notice No. 175 declares the area within a radius of ten miles of Mponela as an area infected with rabies under Regulation 18 of the Control of Dogs Ordinance, 1949 and 1950.

(m) Government Notice No. 176 lays down the Public Health (Factories) Sanitation Rules under section 5 of the Factories Ordinance (1946).

(n) Government Notice No. 178 amends Government Notice No. 144 of 1948 by applying certain provisions of the Public Health Ordinance, 1948, to the settled areas of the Cholo District.

(o) Government Notices No. 195, 196 and 197 declare the area of Native Authority Chapananga an area infected by human trypanosomiasis and apply the Public Health (Infected Areas) (Human Trypanosomiasis) Rules, 1952, in accordance with section 31 of the Public Health Ordinance, 1948.

C. Visitors

19. Dr. George Giglioli, O.B.E., the eminent malariologist from British Guiana, visited the Protectorate during April and May on behalf of Booker Brothers to conduct an investigation into the health problems inherent in the development of sugar plantations in the Lower Shire River. During his visit Dr. Giglioli imparted much valuable information and advice on the control of malaria by residual insecticides. He addressed a well-attended meeting of the local branch of the B.M.A. on the malaria control organization in British Guiana, illustrating his lecture by lantern slides and film strips.

20. Dr. B. A. Dormer, Chief Tuberculosis Officer of the Union of South Africa, during an holiday visit to Nyasaland, met members of the staff and discussed African tuberculosis problems. Again, most valuable information and advice was given.

21. Dr. T. A. Austin, C.M.G., Zonal Public Health Medical Officer of the World Health Organization Regional Organization spent a month in the Territory during May and June. He carried out a survey of the Government Health Services on behalf of the World Health Organization and gave advice on the assistance that could be given by the Organization towards the development of these Services. Dr. Austin was Director of Medical Services of Nyasaland from 1942 to 1946.

22. Professors Louis Berner and Archie Carr of Florida University, undertook an entomological and ecological survey of the area to be developed by the Shire Valley Irrigation Project. They were accompanied on their survey during August and September by a member of the Health Inspectorate. Bilharzia, malaria, filariasis and onchocerciasis problems were studied in relation to present incidence, vectors, intermediate hosts and the prevention of these diseases in the areas which will be affected by the Irrigation Project.

23. Dr. C. C. Chesterman, O.B.E., paid a short visit at the end of October to study the systems of training of African male medical and health auxiliaries in Nyasaland. This visit was made in connection with a study of the systems in vogue in the African Colonial Territories of Britain, France and Belgium, and in Southern Rhodesia.

24. Dr. R. G. Cochrane, M.D., F.R.C.P., Medical Secretary of the British Empire Leprosy Relief Association, spent ten days touring the institutions engaged in the treatment of leprosy in Nyasaland. His visit and advice was greatly appreciated by all those with whom he came in contact during his tour of the Territory.

25. Mr. E. F. King, F.R.C.S., Ophthalmic Surgeon to the Westminster Hospital, represented the Panel of Medical Visitors of the Nuffield Foundation. Mr. King spent four days in Zomba at the end of November, where he gave clinical demonstrations on the diagnosis and treatment of eye diseases. He operated on a number of cases at the Zomba African Hospital. His visit was a most valuable one in a country where there is no specialist ophthalmic service. He addressed the local Branch of the B.M.A. on Cortisone in the treatment of Eye Diseases.

26. Dr. Alan Mozley, Ph.D., paid a private visit to the Protectorate lasting some three weeks during December. His purpose was to study the snail vectors of bilharzia in Nyasaland and to gain information on the methods of control that could be developed most economically.

D. Financial

27. The estimated expenditure of the Department during 1952, exclusive of that chargeable to the Colonial Development and Welfare Fund, was 8.166 per cent. of the estimated total ordinary expenditure of the Protectorate, and 6.15 per cent. of the estimated total expenditure.

28. The basis of administration of Colonial Development and Welfare Fund allocations to the Protectorate was altered with effect from 1st January, 1951. The unexpended balance of the allocation to the Medical Department is now being used to assist the development expenditure of the Department rather than to meet expenditure on specific projects. The yearly allocations for the period 1951 to 1955 become a fixed percentage of the Department's actual annual expenditure in each of the five years, subject to an annual maximum of £35,000. The total estimated expenditure for the year, 1952, was £255,699 of which £80,000 was defined as expenditure on development. Of this latter amount 35 per cent., subject to a maximum of £35,000, is the grant to be made from Colonial Development and Welfare Funds. Under this system the main heads of development expenditure for 1952 were estimated to be:—

	£		
(1) General duty staff and adequate provision for transport and travelling	19,000		
(2) Provision of well equipped central curative units	35,000		
(3) Training more African auxiliaries	10,500		
(4) Reorganization of the leprosy service	5,500		
(5) Modern Mental Hospital (equipment and increased recurrent costs) ..	7,000		
(6) Smallpox control and insect vector control	3,000		
TOTAL	£80,000		

29. The total revenue of the Department amounted to £15,134-10s-2d as against £10,032-4s-4d collected during 1951. This does not include the revenue from the sale of anti-malarial drugs through Post Offices. Revenue was collected under the following Heads:—

	1951			1952		
	£	s	d	£	s	d
Hospital Fees	6,822	8	7	9,304	7	10
Sale of Stores	1,811	8	3	3,952	4	8
Pathological Fees	31	4	6	21	0	0
Radiological Fees	695	10	0	749	12	6
Dental Fees	606	3	0	1,055	19	6
Ambulance Fees	60	14	0	48	7	8
Yellow Fever Inoculation Fees ..	4	16	0	2	18	0
TOTAL	£10,032	4	4	£15,134	10	2

30. Sales of quinine, mepacrine and paludrine at Post Offices were as follows:—

				1951			1952		
				£	s	d	£	s	d
Quinine	..	..	..	1,341	4	7	1,112	13	1
Mepacrine	..	..	..	389	2	1	509	2	4
Paludrine	..	..	..	984	2	0	1,185	12	4
TOTAL				£2,714	8	8	£2,807	7	9

SECTION II. PUBLIC HEALTH

A. General Remarks

31. The financial recession, which hit the Protectorate towards the end of 1951, had a marked effect on the work during 1952. This was naturally most manifest in the slowing down of the capital programme, apart from the resumption of the construction of the new Mental Hospital, which is financed from a specific Colonial Development and Welfare Fund grant, no major development work was undertaken.

32. As stated in the Annual Report for 1951, the main features of the development programme for the period 1950–1955 are as follows:—

(i) The provision of more general duty staff with adequate facilities for transport and travelling which will ensure that existing curative establishments have the supervision necessary for maximum efficiency;

(ii) the provision of well equipped central curative units;

(iii) the training of more African auxiliaries;

(iv) the development of Health Units and the construction of a limited number of new dispensaries;

(v) the reorganization of the leprosy service on modern lines;

(vi) the provision of a modern mental hospital equipped to treat mental disease.

33. The pinch, as was to be expected, was felt most acutely in the preventive field. Existing curative establishments, already fully occupied with the calls made upon them, must necessarily be maintained. Accordingly, such economies as were exercised were at the expense of the preventive service. One fortunate feature was that the number of unfilled vacancies on the approved establishment left some leeway which could be made up as recruitment improved.

34. *Staff.* The posts of Assistant Director of Medical Services (Health), Chief Health Inspector and two Health Inspectors, were held in abeyance throughout the year. One vacancy for a Health Inspector was filled, but with an effective establishment of only four Health Inspectors, one of whom was fully occupied at the Sanitary Assistants' Training School, this vitally important aspect of environmental hygiene in the rural areas perforce received but scant attention.

35. The arrival of two Special Grade Medical Officers, one a physician and the other a surgeon and four general duty Medical Officers, allowed of a more adequate staffing of Provincial and District hospitals. For the first time for many years the Northern Province had an allocation of two European Medical Officers, one of whom assumed the duties of Provincial Medical Officer in addition to his district duties. In addition, it was possible to post a full time Medical Officer to the Domasi Development Area in the Southern Province where a system of field surveys linked to active curative and preventive work is being developed.

36. On the Nursing side, recruitment improved appreciably and despite losses on account of transfer or marriage, a more adequate establishment was maintained than has been possible since before the war.

37. *Transport and Travelling.* Rigorous restrictions were necessary in this connection and essential routine travelling for supervisory purposes had to be curtailed. A disturbing feature has been the lack of replacements for vehicles already on the road and the ambulance service suffered severely. Ageing ambulances required heavy maintenance and frequent spells off the road for major repairs.

38. *Central Curative Units.* The arrival of equipment ordered during 1951 helped considerably to improve facilities at a number of the larger hospitals. The major disappointment, due to the restriction of the capital programme, was the failure to provide additional beds at the Lilongwe African Hospital, now a Training Centre for Medical Aides. The lack of beds, quite apart from the actual hospital needs, has greatly handicapped the training programme.

39. Work on the planning of the Group Hospital continued and by the end of the year preliminary site and sketch plans were coming forward from the Consulting Architects.

40. *Training of more African Auxiliaries.* In this direction progress has been encouraging. The first year's work in the new training school for Medical Aides at Lilongwe went forward smoothly and the second intake of first year students was adequate and of good quality.

41. At Zomba the new midwives' hostel had been completed by the end of December and the pupil midwives were being moved to the building, which is to be opened formally early in 1953. The hostel provides dormitory accommodation for twelve first-year pupils, cubicle accommodation for ten second-year pupils and a dormitory for girls on night duty. There is ample sitting and dining-room accommodation and a laundry and drying-room for the use of the pupils is a valuable amenity. It

may be said that the pupil midwives are now housed very adequately in surroundings where they have every encouragement and facility for maintaining high standards of personal and group hygiene—a background vital to the proper inculcation of professional pride and competence.

42. *Development of Health Units and Dispensaries.* The Health Unit at Salima was fully staffed during the early part of the year and is now functioning satisfactorily. There are still two other Health Units to be completed and staffed and slow progress is being made with the ancillary buildings. By the end of 1953 it is hoped that the four Health Units will be fully operational.

43. Owing to African staff shortages it has not been possible to increase the number of rural dispensaries. However, the system of domiciliary visiting is now functioning over considerable areas of the Protectorate and certain Native Authorities have provided small satellite clinic buildings in which visiting hospital assistants and medical aides can work and keep small supplies of essential drugs.

44. *Reorganization of the Leprosy Service.* At Kocira, the site for the proposed Central Government Leprosarium, work proceeded on little more than a care and maintenance basis, again owing to the restriction of the capital programme. However, much preliminary work was done under the direction of the B.E.L.R.A. Supervisor. Clearing of the estate, brick and tile making and the establishment of a herd of cattle preparatory to the development of mixed farming, went ahead as far as the limited funds permitted.

45. The issue of sulphones to Government subsidized Mission Leprosy Institutions continued and adequate supplies were issued for the treatment of all in-patients and a limited number of out-patients. The visit of Dr. R. G. Cochrane, Medical Secretary of B.E.L.R.A., already referred to, was an encouragement both to the Missions visited and to the Government staff concerned with the expansion of leprosy control measures.

46. The creation of the Brown Memorial Fund during the year was an item of considerable importance to leprosy control in Nyasaland. The late Mrs. M. H. D. Brown and Miss M. A. Brown, formerly tea planters in the Mlanje District, bequeathed their residuary estate “for the benefit of the lepers of Nyasaland”. After protracted legal proceedings over the validity of the will, the High Court ruled that the Brown Memorial Fund should be established, vested in a Board of Trustees consisting of eight persons of whom three are to be *ex-officio*, namely the Director of Medical Services, the Accountant General and the Administrator General; five other representative trustees were to be appointed, one by the Governor in Council, one by the Christian Council of Nyasaland, one by the Bishops of the Roman Catholic Church in Nyasaland, one by the African Protectorate Council and one by the Nyasaland Branch of the British Red Cross Society.

47. The objects of the Fund, which totals some £232,000, are to make grants and periodical payments, as the Trustees think fit, towards the development and upkeep of institutions providing treatment for Nyasaland lepers; provision is also made for the support of leprosy research work in Nyasaland.

48. A preliminary meeting of the Trustees was held on the 10th December, 1952, and the fully constituted Board of Trustees is to start work early in 1953.

Mental Hospital

49. The building of the last four ward blocks which complete the first stage of development of the new mental hospital was resumed. By the end of the year the roofs were on the buildings and there is now a prospect of occupying the new hospital towards the end of 1953.

50. When the new mental hospital is occupied, the existing Central Lunatic Asylum is to be converted into an annexe in which convalescent patients can live under conditions approaching village life and under a minimum of restraint. It is thus hoped to condition patients gradually to the life of the outside world before they are finally discharged to take up a normal existence again. Experience has shown that African patients respond well to this regime and the saving on beds in the mental hospital will be considerable, thus allowing the hospital accommodation to be more fully utilized for only cases which will respond to treatment.

WORK OF BOARDS, SOCIETIES AND COMMITTEES

Advisory Board of Health

51. The Board met twice during the year to consider the health implications of a Memorandum on “*The Principles of Town Planning Blantyre and Limbe High Density Residential Areas*” drawn up by the Blantyre and Limbe Town and Country Planning Committee.

52. The recommendations made by the Town and Country Planning Committee had a direct bearing on the report submitted by the Board to His Excellency the Governor during 1951. After due consideration of the Memorandum, the Board lodged objections to the Governor in Council on the system of sanitation proposed for this African High Density Residential Area and the minimum accommodation standards recommended for seasonal African labourers.

53. The Board's objections were lodged during November and are to be considered early in 1953 when the Town and Country Planning Committee's recommendations come before the Governor in Council.

54. Certain of the Board's recommendations in the report submitted during 1951 on the Sanitary Services of the two townships of Blantyre and Limbe have been followed up, but little real progress has been made pending a decision on the amalgamation of the services of the two townships.

Midwives Board

55. Two meetings were held during the year at which routine business in connection with the bi-annual examinations held by the Board was conducted. One candidate sat the supplementary examination held during March and was referred for a further six month's training. Seventeen girls passed the September examination and were enrolled as Midwives, Class III.

56. Reports had been received that unqualified African women were practising as midwives in rural areas and charging excessive fees for their services. Fees of up to £3 were being charged for a confinement—a grossly excessive fee when the cash income of the average African family is so low. In consultation with Government and the Provincial and District Administration, the situation was investigated and steps taken to try and control this practice at the Native Authority level.

57. The training of Class II pupil midwives in the English medium was continued at the Zomba African Hospital and the work of the School is referred to in the relevant section of this Report.

58. Dr. Gwen Dabb's *Textbook of Midwifery*, published in Chinyanja, was adopted by the Board as the standard textbook for pupil midwives and copies were distributed to all Training Schools during the year.

Factories Board

59. The Board of which the Director of Medical Services is a member met four times. The question of the provision of sanitary conveniences at factories was reviewed and the Public Health (Factories) (Sanitation) Rules, 1952, were promulgated in September.

60. Recommendations were made regarding the protection of labourers against certain health hazards in the baling of cotton and against occupational risks in connection with the operation of maize mills which are being installed in numbers in the rural areas.

Central Labour Advisory Board

61. The Board met three times during the year, draft legislation was reviewed which contains provisions for the safeguarding of the health of labourers. The draft African Employment Bill and the Migrant Workers Bill were before the Board and important health and welfare measures recommended to Government. The Board also advised that the provisions of the Workmen's Compensation Ordinance should be extended to cover all types of employment, but excluding domestic servants employed by private individuals whose welfare is provided for in other legislation.

Nyasaland Branch of the British Red Cross Society

62. It is again a pleasant duty to record an appreciation of the invaluable and enthusiastic support given by the Branch to Hospitals and Clinics in the Protectorate. This support covers a wide range of activities, from the supply of dressings, equipment, comforts and literature for hospitals and clinics to the organization and the keeping up to date of the list of blood donors of all races.

63. The divisional work parties, including the newly formed division in Mzimba, "adopt" hospitals, clinics and leprosy settlements with which a close liaison is maintained. The work parties make up dressings, roll bandages and sew hospital requisites; certain divisions have organized classes in practical first-aid and home nursing for African associate members.

64. Special mention is made of the work in connection with the Blood Transfusion Service. At the larger hospital centres there is now a well organized system of recording and of calls for donors of known blood groups. There is an increasing number of patients in the Protectorate Hospitals who are benefitting from this life-saving service. It is gratifying to record a notable increase in the number of Africans who have enrolled as blood donors.

65. A Red Cross Baby Clinic was opened in September in the Limbe Township and has proved very helpful and popular. Organized and run by a trained nurse, who is a member of the Limbe Division, the clinic made a good start and interest is being well maintained.

66. Again the Branch supplied quantities of dried milk free to maternity and child welfare clinics throughout the Territory. This is a particularly valuable service to Mission organizations who are very appreciative of this practical help.

67. A Medical Loan Section was established and equipment loaned to invalids and others in need of temporary assistance in this direction. Scholarships were again granted to six African women who wish to train as midwives in Nyasaland.

68. A Florence Nightingale Scholarship was awarded by the Parent Society to Miss Charlotte Retief, a Nursing Sister of the Dutch Reformed Church Mission in the Central Province. Miss Retief has gone to the United Kingdom to undertake further study in the tutoring of midwives and she will resume this work when she returns to Nyasaland.

69. Flourishing African sections are working at Zomba, Lilongwe and Mzimba and an increasing interest is being taken in the work of the Red Cross. A Colony Director of the Junior Red Cross has been appointed and this activity is now being developed.

70. The sick and wounded Askari of the 1st Battalion, K.A.R., in base hospitals in Malaya have been supplied with comforts by the Branch, through the Red Cross Welfare Officer in Malaya.

71. Generally, it is an impressive record of hard work and enthusiasm and although only the salient features are touched upon, they give an outline of the valuable support given to the Medical Services of the Protectorate.

Nyasaland Council of Women

72. The Limbe, Cholo, Mlanje and Blantyre Branches of the Nyasaland Council of Women combined to present a wireless set and bedside earphones to the European Hospital in Blantyre. This generous gift was gratefully received and has been a boon to many patients.

73. The Director of Medical Services met the Zomba Branch in April and gave a talk on the control of certain of the important diseases endemic in the District. He also attended two meetings of the Central Executive to discuss problems of hospital accommodation for Europeans, medical insurance, dental services and the training of coloured women as nurses.

British Empire Society for the Blind—Nyasaland Branch

74. A committee representative of all sections of the community met during February to frame policy, to consider a programme of work and to launch an appeal for funds in Nyasaland.

75. The broad outlines of policy are to foster the technical and cultural training of the blind so that blind persons may fit themselves into the normal life of the community; to support and develop the training centre already in existence at Lulwe; to sponsor the compilation of a voluntary register of the blind; and to establish a basket-making industry for the blind in the tea and tobacco planting Districts of Mlanje and Cholo.

76. Much useful preliminary work was done during the year but the slump in the tea and tobacco prices made it inadvisable to launch a major appeal for funds. Therefore, work had to be confined mainly to the preparation of plans for the future, particularly in connection with the compilation of the register of blind persons.

77. The Lulwe School for the Blind, situated near Port Herald, was established by the Rev. Mr. and Mrs. Craill of the South African General Mission. Starting with little else but an absorbing interest in the blind and a great faith in the future, Mr. and Mrs. Craill have built up a small school and training centre for blind persons in the Lower Shire River area. Mrs. Craill, who is a trained teacher of the blind, has two blind African assistants who teach the 25 blind children the rudiments of reading and writing. A few adults are being taught mat-and basket-making. This school, the only one of its kind in the Protectorate, was given a grant of £3,000 from the N.D. & W. Fund during 1951 and this money is being used to increase accommodation at Lulwe, to build a house for more European staff, to provide a good access road and to build a dispensary. The Nyasaland Branch is basing its immediate programme of development on Lulwe until such time as funds are available to build a more central training centre in the Blantyre District.

Trypanosomiasis Committee

78. This committee, which is under the chairmanship of the Director of the Department of Game, Fish and Tsetse Control, met twice during the year. An outbreak of sleeping sickness in the Chikwawa District of the Lower Shire River area gave rise to some concern as there had not been cases of the disease reported in that area for many years.

79. Officers of the Medical Department surveyed the area and reported on the outbreak. The committee then made its recommendations to Government on the control measures that should be adopted.

80. Routine reports on the Tsetse Fly Survey being made under a Colonial Development and Welfare Grant were studied and the programme of further work outlined.

Advisory Committee on Medical Missionary Work

81. It had been represented by certain missionary organizations that an Advisory Committee should be set up in Nyasaland through which the medical missions could present their views to Government on the integration of their medical services with those of Government. A preliminary meeting was held in Zomba during August and was attended by representatives of all the churches and missionary societies engaged in medical work in the Protectorate.

82. The terms of reference are:—

“ To advise Government, through the Director of Medical Services, on all aspects of the medical work of the missions in Nyasaland and to promote co-operation between Government and the missions in the furtherance of this work ”.

83. Government gave its recognition to, and approval of, this advisory committee and the first full meeting was held in October. The Committee which is under the chairmanship of the Director of Medical Services, consists of the Principal Matron, a Provincial Medical Officer, the Medical Officer in charge of the Zomba African Hospital and training school, and four representatives each of the Christian Council and the Roman Catholic Churches in Nyasaland. The advisory committee promises to fulfil a very useful function and to be of great assistance to Government and the Department in promoting and integrating all branches of medical work in the Protectorate.

B. Communicable Diseases

84.—*Smallpox*. Seven cases of smallpox occurred, five of which were notified from the Mlanje District. There were no deaths reported. Comparative figures for the years 1945–52 are given below:—

					Cases	Deaths
1945	..	..	..	..	202	2
1946	..	..	..	..	968	36
1947	..	..	..	..	2,583	189
1948	..	..	..	..	4,830	606
1949	..	..	..	..	1,264	239
1950	..	..	..	..	295	53
1951	..	..	..	..	122	15
1952	..	..	..	..	7	—

TABLE I
VACCINATION AND SMALLPOX CASES 1952

Medical District	Primary	Accelerated	Immediate	Not seen again	Total	Smallpox	
						Cases	Deaths
NORTHERN PROVINCE							
Karonga	1,112	914	746	508	3,280	—	—
Mzimba	7,304	4,103	1,987	11,920	25,314	1	—
Chinteché	1,637	878	673	393	3,581	—	—
TOTAL NORTHERN PROVINCE ..	10,053	5,895	3,406	12,821	32,175	1	—
CENTRAL PROVINCE							
Kasungu	1,511	2,718	786	9,483	14,498	—	—
Kota Kota	—	—	—	—	—	—	—
Fort Manning	3,156	2,913	3,776	7,823	17,668	—	—
Dowa	8,194	—	1,767	2,741	12,702	—	—
Lilongwe	8,115	5,237	5,060	3,155	21,567	—	—
Dedza	4,085	—	1,631	1,385	7,101	—	—
Ncheu	—	—	—	—	—	—	—
TOTAL CENTRAL PROVINCE ..	25,061	10,868	13,020	24,587	73,536	—	—
SOUTHERN PROVINCE							
Fort Johnston	393	253	288	301	1,235	—	—
Liwonde	370	—	244	3,608	4,222	—	—
Zomba	32	171	—	—	203	—	—
Blantyre	170	60	10	398	638	—	—
Chiradzulu	173	95	70	67	405	—	—
Mlanje	11,136	6,937	1,428	912	20,413	5	—
Cholo	12,763	7,057	4,414	7,734	31,968	—	—
Chikwawa	3,824	7,913	2,056	768	14,561	1	—
Port Herald	2,775	5,110	2,956	2,662	13,503	—	—
TOTAL SOUTHERN PROVINCE ..	31,636	27,596	11,466	16,450	87,148	6	—
TOTAL PROTECTORATE ..	66,750	44,359	27,892	53,858	192,859	7	—

85. The policy of intensive vaccination in the Mlanje and Cholo Districts, which has been in force for the past two years, appears to have borne fruit in that the number of cases notified from Mlanje and Cholo during 1951 was 105 as compared with five during 1952. As has been mentioned in previous Annual Reports, there is a constantly changing migrant labour force employed for seasonal work on the tea and tobacco estates. The control of the migrant labourers and their dependants has posed a difficult problem which can only be solved by constant vigilance in these strategic border districts.

86. Calf lymph vaccine production was well maintained and special reference to this activity is made in the section dealing with the work of the Central Laboratory. Using a vaccine of enhanced potency and carrying out vaccination by well-trained personnel, special attention was paid to the Northern Province and to the urban and peri-urban areas of Blantyre and Limbe. In the Northern Province 32,175 vaccinations were performed in the rural areas and in the Blantyre and Limbe areas a further 62,582 were done in conjunction with the township authorities. Routine vaccination in the districts continued and Table I sets out the work done

87.—*Poliomyelitis*. Seven cases were notified and no deaths occurred. The cases all occurred sporadically, the majority being diagnosed when the patients were brought to out-patient departments on account of paralysis.

88.—*Influenza*. There was a total of 783 cases notified with two deaths. The main incidence occurred in the hill area of Bembeke in the Dedza District, where 573 cases were reported with only one death. There was a minor outbreak in the Cholo District, accounting for 126 cases, no deaths being reported. The disease occurred in a mild form and few complications were noted.

89.—*Rabies*. The incidence of rabies in animals continues to give concern and the Veterinary Department is continuing to take stringent measures to control the disease in the townships which are the only areas that can be safeguarded with the staff and facilities available.

90. Two human deaths from rabies occurred in the Central Province, both Africans bitten in villages, who had not come forward for treatment at the time of the bite. There was a total of 346 courses of anti-rabies vaccine given to persons who had been in contact with rabid animals.

91. Proved rabies in animals affected 28 dogs and nine cows, all of the latter being bitten by one rabid dog on an estate in the Southern Province. A total of 512 dogs received Fleury Vaccine and there were no cases of proved rabies amongst the vaccinated animals.

92. The reservoir of the disease is in the wild animals and eradication is not economically practicable at the present time. However, every endeavour is being made to protect the domestic animals in the townships and thus to provide a barrier of immunized animals in the centres of population.

93.—*Yellow Fever*. Yellow Fever has never been diagnosed clinically in Nyasaland, the few viscerotomy specimens of liver taken from suspected cases have been uniformly negative and virus has never been isolated from either humans, animals or mosquitos.

94. The investigation into the incidence of human immunity to the disease, sponsored by the World Health Organization, continued during the year and a total of 1,659 specimens of human serum, taken exclusively from women and children, were sent to the Virus Research Institute at Entebbe, Uganda, where the mouse protection test was carried out. The results obtained were:—

Under 15 years of age				Over 15 years of age			
Positive	Negative	Inconclusive	Toxic	Positive	Negative	Inconclusive	Toxic
7	639	49	20	26	764	125	29

95. Provided that the specificity of the mouse protection test is accepted these results indicate that the virus of yellow fever has been active within the Territory during the past seven years, this period being based on the age of the youngest child who was proved to be immune. However, in common with other neighbouring territories the complete absence of cases of proved yellow fever in humans poses an epidemiological problem that can only be solved by a full investigation by a field research team in the areas where significant rates of positivity have been uncovered.

96.—*Measles*. Following on the widespread epidemic during 1951, as would be expected, measles did not manifest itself in any great numbers. Only 255 cases were notified and no special features were reported.

97.—*Relapsing Fever*. There were 324 cases, of whom two died. Mzimba District again provided the largest total of cases, 99 being reported. All three Provinces were equally affected, 102 cases occurring in the Northern Province, 114 cases in the Central Province and 324 cases in the Southern Province.

98. Since the inception of a regular insecticide service, using Gammexane, the incidence in the most heavily infected centres has declined. However, it has not been possible to extend this service to the villages as yet and all the cases reported have emanated from the villages. It is planned to attack the vector *ornithodoros moubata*, in the first instance, in the Mzimba District by treating huts with a gammexane-sawdust mixture, using the clinical cases to indicate the villages to be treated.

99.—*Filariasis*. The main incidence of clinical filariasis is to be found on the Karonga Lake-shore and on the Lower River. *W. bancrofti* is the predominant filaria but a number of perstans infections are noted. During the year the investigation, referred to in the 1951 Annual Report, was extended to Chikwawa Hospital in the Lower River and of 220 night blood smears taken, 33 showed microfilaria.

100.—*Malaria*. At hospital out-patient departments 39,984 cases of malaria were treated, of whom 251 were Europeans. Of these cases, 5,046 were admitted to hospital and there were 96 deaths due to malaria; of the 184 Europeans admitted for treatment of malaria, two died. There were four cases of blackwater fever, three of whom were Asians and one a European who died. There was no significant increase in incidence during the year.

101. Infections are predominantly due to *P. falciparum*, and in batches of films examined at random the percentage of infections due to *P. malariae* varies between 10 per cent. or 20 per cent. of the total. *P. vivax* is present in 5 per cent. to 10 per cent. of films. Mixed infections account for a very small percentage of the samples investigated.

102. *Anopheles gambiae* is the main vector of the disease but *A. funestus* also plays a part in the areas suitable to the breeding of this species. Transmission is, however, mainly seasonal and records over a number of years show a close relationship between the maximum intensity of *A. gambiae* and the peak incidence of malaria. No other vectors have as yet been incriminated.

103. Permanent anti-malarial drainage works were continued on a small scale in the main townships of Blantyre, Limbe, Zomba and Lilongwe, where control is mainly confined to anti-larvae measures. In the highland areas anti-larvae measures were used to protect certain sanitary board areas and district headquarter stations. On the Lower River and along the Lake-shore insecticide control using gammexane has been instituted at all the larger Government stations. The work of the vector control organization is referred to more fully in section VI of this Report.

104.—*Bilharzia*. A total of 10,470 cases were seen at hospital out-patient departments and a further 7,146 cases reported from rural dispensaries. There were 1,051 cases treated in hospital and two deaths due to bilharzia were recorded.

105. The permanent drainage works at Kota Kota on the Lake-shore were maintained and extended. A notable advance has been the installation of a piped water supply to sections of the African townships as the establishment of water points and communal ablutions is the next step towards a satisfactory and rational system of control. It is planned to extend the drainage system to other areas of the township and to treat pools which are expensive to drain with copper sulphate. One of the difficulties in establishing full control is that the population of the area is predominantly Mohammedan and the custom of washing after the passing of excreta tends to discourage the use of pit latrines and concentrate faecal and urinary pollution in the numerous sheltered and stagnant pools in the area. Health education has a vital part to play in tackling this aspect of the problem.

106. A valuable and interesting experiment in the control of bilharzia is being carried out under the direction of Dr. G. Maclean, C.B.E., Medical Officer to the U.M.C.A. on Likoma Island. The population of the Island is being surveyed at regular intervals and all found to be infected are treated, using Nilodin which has been donated by the Nyasaland Branch of the British Red Cross Society. In the

first survey over 1,000 persons were found to be infected and were treated; the next survey of over 3,000 persons revealed a further 400 who were infected. Again these persons were treated. Destruction of snails has been carried out at the same time, the methods in use being trapping and poisoning with molluscicides. Propaganda on the maintenance of sanitary standards and a sense of civic responsibility is being pursued concomitantly and the results to date are promising. A more detailed account of this experiment should be available during 1953 when the work of three years can be assessed.

107.—*Ancylostomiasis*. Of 8,895 cases seen at hospital out-patient departments, 2,141 were admitted to hospital for treatment; there were six deaths. At rural dispensaries a further 5,630 cases were diagnosed.

108. The drive to provide pit latrines for all families in the villages continues district by district. Progress is slow, particularly in view of the paucity of supervisory personnel, but is nevertheless being made. The enforcement of Native Authority rules, requiring the construction of latrines, is becoming more general and many more persons are being fined for breaches of the rules. This does not necessarily mean that the latrines are in constant use, but such inspections as are possible do indicate that the villagers may be becoming more co-operative in this direction.

109.—*Trypanosomiasis*. Following on the one male adult case of rhodesiense sleeping sickness reported from the Chikwawa District in the Lower Shire during 1951, two further cases were discovered at the District Hospital in March, 1952, one being the wife and the other the child of the first case. During May, a further case was discovered in the hospital in the course of an investigation of night blood smears taken from in-patients during a survey of the incidence of filariasis. A medical officer then surveyed the population of the village from which this case emanated, but no further positive smears were obtained or clinical cases discovered. In June another case appeared, again as a result of a routine investigation for filariasis.

110. A meeting of the Trypanosomiasis Committee was held in July to decide on the administrative action to be taken by all the Departments concerned. As a result, a Medical Officer was posted to the Chikwawa District to survey the affected area and the Tsetse Entomologist also carried out an independent survey. The area of Native Authority Chapanagera was declared to be an infected area under section 31 of the Public Health Ordinance, 1948, and rules made, under section 31 of the same Ordinance, which gave the powers necessary for compulsory treatment and for the institution of other essential control measures.

111. An estimated population of 3,500 persons live in the infected area and 350 blood smears were taken, as far as possible, at random. A total of eight cases had occurred by the end of August, two of whom had died. Only two of these cases were diagnosed from routine blood smears, the remainder reporting sick with the disease. All cases received treatment and those who recovered are subject to routine surveillance.

112. By the end of the year a further four cases had been discovered, making a total of twelve cases since June, 1951. As no cases had been reported in the District since 1936 the situation is being carefully watched and routine blood smears are being obtained at regular intervals by a Medical Aide sent out from the Chikwawa Hospital for this purpose.

113. The Tsetse Entomologist reported that only *G. morsitans* was to be found in the fly belt which extends from the right bank of the Mwanza River westwards across a sandstone escarpment to the Portuguese East African border, this belt being a prolongation of vast fly belt which runs for many miles in the Zambesi Valley. Rhodesiense sleeping sickness is endemic in the contiguous district across the border and, therefore, the continued movement to and fro across the border by well defined routes presents a continuing risk. A liaison with the *Missao de Combate as Tripanossomiasis* has been established and monthly reports on conditions in the contiguous districts are being exchanged.

114. Sleeping sickness has been recognized for many years in this District, it being known in the vernacular as the "nodding disease". On the fertile plain on the right bank of the Mwanza River there is a close association between man and fly, whereas on the sandstone escarpment known as the Sumbu and which does not support a settled population, fly is only plentiful during seasons when the ecological conditions are favourable. Therefore, although there may be long periods of freedom from the disease in the Mwanza plain, it is not surprising that it makes its appearance from time to time. The epidemiology of this outbreak is obscure but the situation is being watched closely and the question of biological control by increased settlement on the Mwanza plain is receiving active consideration.

Leprosy

115. There are seven mission leprosy settlements, five of them in Nyasaland, treating Nyasaland leprosy patients, which receive a subsidy from Government for this work. Sulphones for treatment and certain other essential medicines are supplied free.

116. There was a daily average of 1,261 in-patients treated in these settlements during 1952; a further 153 patients attended mission out-patient departments for treatment. In Government hospitals 119 leprosy patients were treated in isolation wards or as out-patients. More patients were under treatment with drugs of the sulphone series than in any previous year and all mission settlements are now using these drugs.

117. Table II sets out the detail of the work undertaken by the mission leprosy settlements. Although there was little expansion possible during 1952, a great deal of work has been done and it is fitting to pay a tribute to these doctors, nurses and lay workers who have done and are doing so much to relieve the lot of the leprosy patients under their care. The future holds out great possibilities of expansion of the work under improved conditions and may be faced with confidence.

TABLE II

Settlement	In settlement beginning of 1952	Admitted or readmitted during 1952	Discharged or paroled during 1952	Absconded during 1952	Died during 1952	In settlement at end of 1952	Daily average in settle-ment	New out-patients
Loudon (Church of Scotland)	43	44	28	15	2	42	37	—
Likwenu (Universities Mission to Central Africa) ..	54	20	14	1	1	58	54	39
Malamulo (Seventh Day Adventists)	364	128	24	117	4	347	322	58
Mua (White Fathers)	275	193	115	13	7	333	305	23
Mwami (Seventh Day Adventists)	90	53	12	31	—	100	99	21
Utale (Marist Fathers)	450	234	164	48	9	463	425	12
Nsadzu (Dutch Reformed Church Mission) ..	24	10	11	—	—	23	19	—
TOTAL ..	1,300	682	368	225	23	1,366	1,261	153

Tuberculosis

118. A total of 438 cases of tuberculosis were treated in Government Hospitals; there were 41 deaths from this cause. Of the cases treated, 308 had pulmonary tuberculosis.

119. Little new survey work was possible during the year but the Medical Specialist conducted an investigation into the clinical aspects of tuberculosis as presented by the cases admitted to his wards. Special reference is made to this investigation in the Report at Appendix B.

120. It was possible to allocate slightly larger quantities of streptomycin and P.A.S. to the two main general hospitals at Zomba and Lilongwe which are undertaking the treatment of tuberculosis under radiological control. The allocations were far from adequate but the introduction of I.N.H. as an adjuvant to treatment with streptomycin and P.A.S. has facilitated a more ample regimen of treatment.

Venereal Diseases

121. During this last year of the Colonial Development and Welfare Scheme No. 505 the balance of the funds remaining was merged into the recurrent allocation for Drugs, Instruments and Stores. As the financial situation did not permit of a corresponding increase in the total sum provided, there was necessarily a restriction in the issue of drugs free to institutions other than Government Hospitals and Dispensaries.

122. Table III sets out the detail of cases treated, in all institutions that furnish records to the Department, during the period of the C.D. & W. Scheme.

TABLE III

			Out-patients treated at Govt. hospitals and dispensaries	Cases treated at non-Govt. hospitals and dispensaries	Total
1945	..	..	5,671	Not known	5,671
1946	..	..	10,011	639	10,650
1947	..	..	17,978	1,906	19,884
1948	..	..	16,899	1,278	18,177
1949	..	..	19,580	2,670	22,250
1950	..	..	22,570	3,029	25,599
1951	..	..	23,736	4,917	28,653
1952	..	..	17,896	4,135	22,031

123. Of the total of 22,031 cases recorded during 1952, there were 15,764 cases of syphilis diagnosed and 5,843 cases of gonorrhoea; of the cases of syphilis seen at hospitals, 6,069 were in males and 5,903

in females. The figures for gonorrhoea are 3,304 males and 2,293 females. There were 424 cases of other venereal diseases reported, mainly from rural dispensaries.

124. The hospital diagnoses which are reasonably accurate show that there has been a considerable drop in the number of attendances for the treatment of syphilis. Compared with 1951, there were 3,752 fewer males and 2,770 fewer female attendances during 1952. It has not been possible to assign a cause to this very considerable reduction in numbers and it seems very unlikely that there has been a drop in the attack rate. There was a small increase in the number of attendances on account of gonorrhoea.

125. At the Zomba African Hospital, Dr. J. L. T. Graham carried out an investigation into the cases of venereal diseases, reporting for treatment during the three month period February to April, 1952. In the three months 132 cases of syphilis, 32 cases of gonorrhoea and three cases of chancroid were diagnosed; no active case of lympho-granuloma was seen. All diagnoses were confirmed in the Laboratory. The total out-patient attendances at the Zomba African Hospital for all causes were: February 6,498, March 6,419, April 5,593.

126. Of the cases of syphilis diagnosed, males and females were evenly distributed. The cases were classified as follows:—

<i>Primary sero-negative</i>		<i>Primary sero-positive</i>		<i>Secondary</i>		<i>Latent</i>		<i>Previously treated</i>		<i>Total</i>
16	..	47	..	39	..	16	..	14	..	132

All secondary, latent and previously treated cases had +++ or ++++ Kahn reactions. All primary cases were confirmed by dark ground examinations.

The tribal incidence as recorded is:—

<i>Nyanja</i>		<i>Yao</i>		<i>Lomwe</i>		<i>Angoni</i>		<i>Others</i>
43 per cent.	..	34 per cent.	..	14 per cent.	..	7 per cent.	..	2 per cent.

Only one case of congenital syphilis presented; three infants under one year had muco-cutaneous lesions of the vulva which were positive for treponema by dark ground examinations.

127. The treatment aimed at was one course of intravenous arsenic and ten weekly injections of a bismuth preparation. Of the 132 cases, only three completed a full course. Nineteen had half a course or more, 77 absented themselves before they had received five injections and 33 were still under treatment. Three cases developed jaundice and two arsenical dermatitis; none were of a severe nature and responded quickly to treatment.

128. Of the 32 cases of gonorrhoea diagnosed only one was in a female; she had a Bartholin's abscess and returned later for the treatment of syphilis. Practically all the cases seen gave an history of three to four weeks duration. Treatment with sulphonamides was given at first but proved to be a waste of time and drugs and thereafter one injection of 300,000 units of penicillin in oil was adopted as the standard treatment with excellent results.

129. A number of re-infections presented for treatment within seven to ten days, but repeated attempts to get the partners to come for treatment were quite unsuccessful. Cases with complications were rare and only two cases of epididymitis were seen, both of whom had had irregular and insufficient treatment, as out-patients, with sulphonamides. With rest and penicillin they responded quickly to treatment.

130. There were six cases of gonococcal conjunctivitis in children which responded within 48 hours to penicillin parenterally and irrigation of the eyes with saline.

131. The main points of importance arising from this investigation were that most patients attended for injections until the lesions healed and the patients then ceased to attend. There was little co-operation from the patients either in returning for a follow-up inspection or in the tracing of contacts. Prostitution is only a factor in the bigger centres of Zomba, Blantyre and Limbe. The great factor in any programme of control must be education of the female population in the rural areas and the intensive use of penicillin in massive doses to check infectivity.

132. A policy of building up stocks of penicillin within the limitations of budget allocations is being followed. Once adequate stocks have been accumulated then the standard treatment will be by penicillin. In the meantime, penicillin is being used for the treatment of venereal disease at the Zomba African Hospital in order to assess the most economical and practicable regimen of treatment at district hospitals and, later, rural dispensaries.

C. General Diseases

133. Owing to a serious shortage of trained Medical Aides a large proportion of the attendances at rural dispensaries were recorded as "unclassified" attendances. Accordingly, comment on general diseases is confined to hospital in-patient and out-patient attendances.

Deficiency Diseases

134. There were 157 cases recorded of which 136 were due to pellagra. Comment has been made in previous Reports on the relatively few cases of frank deficiency seen each year. On the other hand there are many signs of the stigmata of deficiency to be seen in out-patient departments, all associated with worm infestation or other debilitating diseases.

Diseases of the Skin and Cellular Tissues

135. Of the total of 78,360 out-patient attendances 51,791 attendances were due to “ulcer”. Male attendances for this cause totalled 39,080 and female attendances 12,711. Tropical ulcer is an important cause of loss of production, particularly as the peak incidence is during the months of greatest agricultural activity. The figures recorded give no indication of the total incidence of this disabling condition.

Diseases of the Digestive System

136. The majority of the out-patient attendances of 50,402 persons were due to minor complaints, constipation, dyspepsia and dental caries accounting for just under 50 per cent. of the attendances. The commonest cause of admission to hospital was inguinal hernia, followed by diarrhoea and enteritis of children under two years.

Diseases of the Respiratory System

137. There were 59,393 out-patient attendances of which 19,749 were due to bronchitis. Pneumonia accounted for 1,490 attendances and of those attending 1,364 were admitted to hospital. There were 106 deaths in hospital from pneumonia giving a death rate of 7.8 per cent. Pneumonia continues to show the highest death rate of all diseases treated in hospital despite the use of antibiotics and the drugs of the sulpha group. The main factor in the maintenance of this high rate is believed to be the late stage in the disease at which the majority of cases come for treatment.

Diseases of the Eye

138. There were 19,152 cases of eye disease treated, of which 17,702 were suffering from conjunctivitis. Trachoma was diagnosed in 79 cases and corneal ulcer in 315 cases. Again only a small proportion of those suffering from diseases of the eye attend at hospital out-patient departments and the figures quoted give no idea of the incidence in the territory.

Injuries and other forms of Violence

139. Under this group there is again a very substantial number of attendances recorded, totalling 59,610. Of this total, 23,722 were due to wounds, 3,354 due to burns, 7,601 due to injuries by falls, etc., and 20,957 due to other forms of violence. There were 3,904 admissions to hospital and 101 persons died as a result of injuries.

D. Hospitals and Dispensaries

140. During the year 1,087,159 persons of all races attended at Government hospital out-patient departments, health centres and rural dispensaries. Of this total 34,071 were admitted to hospitals; there were 708 deaths in the hospitals. During domiciliary visits to villages, 32,619 persons were given treatment for minor illnesses and 143,981 persons attended health talks and demonstrations. When the numbers of persons reached in the villages is added to the above totals, it will be seen that a grand total of 1,263,759 persons had a direct contact with the Government Medical Services. The Mission Medical Services also treated a very large total but records are very incomplete as yet and not even an approximate figure can be given.

141. The record of work of Government medical institutions for the five year period 1948 to 1952 is set out in Table IV.

TABLE IV
PATIENTS TREATED AT ALL CENTRES BY GOVERNMENT MEDICAL SERVICES

Year	OUT-PATIENTS					IN-PATIENTS		
	Rural dispensaries	African hospitals	European hospitals	Village visits	Total	European hospitals	African hospitals	Total
1948 ..	571,302	283,145	2,880	—	857,327	651	29,459	30,110
1949 ..	608,520	341,749	3,611	—	953,880	740	26,693	27,433
1950 ..	625,356	371,162	4,374	—	1,005,902	984	30,173	31,157
1951 ..	672,517	379,541	4,592	—	1,052,650	1,094	30,118	31,212
1952 ..	691,078	391,252	4,829	32,619	1,119,778	1,181	32,976	34,157

142. An interesting feature of the work of the rural dispensaries has been the increased work done during village visits. Not included in Table IV are the figures for attendance at health talks given during these visits, 143,981 persons being recorded as having attended the talks. This may be a relatively small number but it is nevertheless a substantial beginning in health education in the villages, however rudimentary the teaching may be. Immediate results cannot be expected but over a period of years a sense of the importance of village hygiene will inevitably be developed.

Hospitals

143. The three European hospitals, maintained by Government, provide a total of 38 beds, an increase of four beds over the 1951 figure. The daily average number of in-patients was 21.45, a slight increase over the 1951 figure of 21.36.

144. Additions to the European Hospital, Blantyre, which were completed by the end of the year, have provided a new ward of four beds and a new out-patient wing consisting of a waiting-room and a consulting room. This has greatly eased the congestion which existed previously when the out-patients were seen in the main hospital block. Internal alterations have shut off the maternity section from the general wards and provided a room for the routine care of the babies.

145. In the African Government hospitals there are 1,115 beds but this is purely a formal indication of beds available rather than ward capacity. The daily average in-patient state was 1,156.59 and despite an increased turn over of patients it is now essential to provide more accommodation in the African hospitals if the needs of the territory as a whole are to be met. In this connection plans to increase the bed accommodation at certain of the larger hospitals had to be abandoned temporarily as a result of the restriction of the capital works programme.

Health Units

146. Two Health Units are now in full operation at Kaphuka and Salima respectively. There are two others nearing completion, one at Mwanza in the Southern Province and the other at Mitundu in the Central Province.

147. The function of the Health Unit is to provide a curative service for those patients who do not require hospital treatment, a maternity and child welfare service, and a health education service to the surrounding villages. The staff consists of a hospital assistant, a medical aide, a sanitary assistant and a midwife, all Africans trained in Nyasaland. The staff pay regular visits to the villages during which they see such patients as may need attention at home and follow up the progress of those who have received treatment at the Unit. Talks are given on health subjects, particularly the simple means of prevention of the common endemic diseases. The sanitary assistant, in turn, follows up with practical advice and assistance.

148. Each Health Unit consists of a dispensary, a maternity ward of four beds to which is attached a labour ward, and a rest house for patients who have to remain at the Unit for treatment. The patients feed themselves and treatment is provided free.

149. The Kaphuka Health Unit in its first full year recorded 11,965 first attendances and 13,825 subsequent attendances. There were 575 patients who stayed to receive treatment in the rest house. At the maternity clinic 819 new cases were seen and there were 2,079 subsequent attendances. In the maternity ward 189 confinements were conducted, of which 169 were normal. There was one maternal death and 13 still-births. Abnormal cases are transferred to the Dedza Hospital.

150. The Salima Health Unit was fully staffed during the year and the original dispensary service is now expanded to include a maternity and preventive service. Throughout the year there were 47,131 attendances of which 17,459 were first attendances. A more detailed report of the work will be given after the first full year of operation as a Health Unit.

Rural Dispensaries

151. The shortage of medical aides continues to be acute and the rural dispensary service has been maintained with difficulty. Little new work has been possible and arrears of maintenance are still mounting. Further, the allocation of funds for travelling has been such that regular supervision has not been generally possible. Despite these difficulties, a greater volume of work than ever before has been dealt with and the system of domiciliary visits, already referred to, has been expanded.

152. One fortunate feature has been the ability to allocate larger quantities of drugs and dressings to the dispensaries. Substantial indents, placed during 1951, permitted more realistic allocations to the district hospitals and, generally speaking, medical aides have not been without supplies during the last ten days of the month, as was the situation during the immediate post-war years.

153. Tables V and VI set out the incidence of diseases, by groups, treated at all Government Hospitals and Dispensaries.

TABLE V
IN-PATIENTS

		EUROPEAN				ASIAN AND AFRICAN			
		Male	Female	Total	Deaths	Percent.	Male	Female	Total
1.	Infectious and parasitic diseases ..	176	77	253	5	1.97	6,664	4,876	11,540
2.	Cancer and other tumours ..	5	3	8	—	—	188	144	332
3.	Rheumatism, diseases of nutrition, endocrine glands and general diseases ..	9	16	25	—	—	206	257	463
4.	Blood and blood-forming organs ..	10	14	24	—	—	75	83	158
5.	Chronic poisoning ..	4	1	5	1	20	12	7	19
6.	Nervous system and sense organs ..	23	22	45	1	2.22	981	587	1,568
7.	Circulatory system ..	31	13	44	2	4.54	187	60	247
8.	Respiratory system ..	35	23	58	—	—	1,634	1,078	2,712
9.	Digestive system ..	148	102	250	1	.4	1,040	608	1,648
10.	Non-venereal diseases and genito-urinary system ..	15	39	54	—	—	501	397	898
11.	Pregnancy, child-birth and puerperal states ..	—	141	141	—	—	—	2,792	2,792
12.	Skin and cellular tissues..	25	17	42	—	—	3,329	1,689	5,018
13.	Bones and organs of locomotion ..	20	7	27	—	—	225	98	323
14.	Congenital malformations ..	1	—	1	—	—	6	8	14
15.	Diseases of early infancy ..	5	1	6	—	—	18	27	45
16.	Old age ..	1	—	1	—	—	12	1	13
17.	Violence ..	55	14	69	1	1.45	2,812	920	3,732
18.	Ill-defined diseases ..	61	67	128	—	—	709	745	1,454
	TOTAL ..	624	557	1,181	11		18,599	14,377	32,976
									708

TABLE VI
OUT-PATIENTS

EUROPEAN HOSPITALS				ASIAN AND AFRICAN HOSPITALS			RURAL DISPENSARIES		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. Infectious and parasitic diseases	345	175	520	..	46,831	27,601	31,028	26,204	57,232
2. Cancer and other tumours	28	16	44	..	319	205	246	158	404
3. Rheumatism, diseases of nutrition, endocrine glands and general diseases	78	62	140	..	6,970	3,868	2,329	2,201	4,530
4. Blood and blood-forming organs	12	59	71	..	324	272	1,399	2,250	3,649
5. Chronic poisoning	4	1	5	..	12	7	—	—	—
6. Nervous system and sense organs	225	133	358	..	17,589	12,142	25,168	25,592	50,760
7. Circulatory system	78	31	109	..	434	181	1,037	609	1,646
8. Respiratory system	241	161	402	..	41,315	18,078	39,572	32,352	71,924
9. Digestive system	499	371	870	..	32,977	17,645	42,461	37,088	79,549
10. Non-venereal diseases and genito-urinary system	34	172	206	..	1,236	949	50	668	718
11. Pregnancy, childbirth and puerperal	—	108	108	..	—	3,263	—	280	280
12. Skin and cellular tissues	347	247	594	..	52,601	18,848	55,684	32,415	88,099
13. Bones and organs of locomotion	93	34	127	..	4,885	2,026	6,361	7,488	13,849
14. Congenital malformation	17	3	20	..	10	11	—	—	—
15. Diseases of early infancy	17	15	32	..	32	37	—	—	—
16. Old age	1	1	2	..	18	9	—	—	—
17. Violence	496	182	678	..	46,359	13,251	38,031	16,873	54,904
18. Ill-defined diseases	309	234	543	..	14,643	6,304	8,990	5,689	14,679
19. Unclassified	—	—	—	..	—	—	147,206	101,649	248,855
TOTAL	2,824	2,005	4,829	266,555	124,697	391,252	399,562	291,516	691,078
TOTAL, ALL OUT-PATIENTS									
1. European Hospitals	..	..	..	..	4,829	..	..	..	..
2. Asian and African Hospitals	..	..	..	..	391,252	..	..	..	..
3. Rural Dispensaries	..	..	..	..	691,078	..	..	..	..
4. Domiciliary Cases	..	..	..	..	32,619	..	..	..	..
GRAND TOTAL	..	..	..	..	1,119,778	..	..	..	..

E. Special Services

Central Laboratory

154. This first calendar year of work in the new laboratory has seen a considerable expansion in its activities. For nine months of the year the Pathologist had two qualified Laboratory Technicians on the establishment and this greatly facilitated the routine work. A total of 42,408 specimens were examined which figure represents an increase of 27 per cent. over the figures for 1951.

155. The production of calf lymph vaccine was maintained and higher yields of pulp were secured as a result of the improved quality and potency of the seed lymph, and of a supply of calves of more suitable age than heretofore. The total yield of lymph pulp was 3,090 grammes giving approximately 925,000 doses. Of this quantity 422,000 doses were issued for use in Nyasaland and 230,000 doses were exported to Southern Rhodesia. In the past, the main bottle-necks in production have been shortage of technicians on the staff and the supply of calves. The latter difficulty will take some time to overcome but, as the herd at the Prison Farm is built up, this difficulty should disappear. Preparations were made towards the end of the year to manufacture lanolinated lymph which, in practice, has proved to stand up better to field conditions by retaining its potency longer and being more economical to use. The main anxiety at the end of the year was the inadequacy of stocks of prepared lymph held in reserve in case of an epidemic.

156. The manufacture of sterile glucose saline for intravenous infusion was carried out to the maximum capacity of the laboratory. In all, 698 pints were made and distributed to hospitals; the potential demands are much greater than this and efforts are being made to expand the production to a more satisfactory level.

157. The hospital assistants in training received instruction in simple laboratory diagnostic techniques, their significance and interpretation. Each member of the class in addition spent at least one month assisting in the routine work so that practical experience could be gained.

158. The first course of training for laboratory assistants was completed in April. The course lasted one year and its aim is to provide as quickly as possible a cadre of laboratory assistants who are able to undertake the routine microscopy and "side-room" work in the district hospitals.

159. The following routine examinations were performed during the year:—

				1952		1951
Bacteriological	..	..	..	2,558	..	1,892
Serological	..	..	..	8,071	..	8,024
Biochemical	..	..	..	2,323	..	811
Haematological	..	..	..	5,477	..	3,109
Histological	..	..	..	169	..	140
Parasitological	..	..	..	23,555	..	19,089
Medico-legal	..	..	..	53	..	66

160. The detail of the work of the laboratory and the comments thereon are set out in the report by the Pathologist at Appendix A of this Report.

Health Survey—Domasi Community Development Scheme

161. Reference was made in the 1951 Annual Report to the aims and objects of this Scheme which is also the subject of a separate Annual Report compiled by the District Commissioner in charge. A brief recapitulation of the health aspects is advisable in the light of the comments which are made below.

162. There is a mass of statistical data on the health problems of the Protectorate which has been accumulated in the files, Annual Reports and archives, over a long period of years. However, it has never been correlated and there is little up-to-date knowledge of the disease pattern in the rural areas. Until such knowledge is available the planning of control measures must inevitably be haphazard. Further, in a relatively poor country, such as Nyasaland, factual planning is vitally important if efficient use is to be made of the meagre facilities dictated by lack of finance for social services.

163. With this in mind it was decided in 1950 to carry out a general health survey by a Medical Officer, working on a part-time basis, in a compact and easily accessible area which may be considered to be geographically typical of large areas of the Protectorate. The work was done by a Medical Officer who had certain hospital commitments and who had only locally trained African auxiliaries as his assistants. Information was sought which would enable a survey technique to be developed that could be applied by a District Medical Officer working on a part-time basis with only African assistants.

164. The Domasi Community, situated 12 miles north of Zomba, consists of 15,953 persons residing in an area of 102 square miles who live in an aggregation of small villages scattered along the hillsides to the west of the main north road from Zomba and along the Chilwa Plain to the east of the road. The watershed is the Zomba Mountain and numerous small streams flow down the hillsides, becoming sluggish and pooling as they reach the plain and eventually draining into Lake Chilwa.

165. From January to May, 1951, the Medical Officer in charge of the Zomba European Hospital carried out a survey of approximately 10 per cent. of the population, using family groups as the units. Co-operation by the villages was unusually good and much valuable experience and information was gained. The preliminary results are being published as a scientific paper.

166. On his return from leave in July, 1952, after undergoing the Course in Tuberculous Diseases at Cardiff University, the Medical Officer was posted on a full-time basis to Domasi so that the preliminary work could be assessed and developed. With equipment and staff at first no more than that normally

available to a large Rural Dispensary, the work was continued on a full-time basis, building up equipment and staff as the needs of the work dictated. In this he was aided, in so far as the administrative and propaganda aspects are concerned, by the European Staff of the Provincial and District Administration attached to the Scheme. At first, progress was slow and the villagers much less co-operative. The novelty of the survey had to a great extent worn off and in addition little curative work had been possible as a follow-up of the preliminary survey. Although preventive work had already started in connection with the control of bilharzia—which had been assessed as the problem best lending itself to immediate control on a village basis—this was not enough. Medicines had not been given! It was thus again heavily underlined that preventive medicine in the rural areas in Africa must have the curative approach unless the preventive measures are impressive and correspondingly costly. For example, community wide insecticide campaigns or clearing and drainage schemes are very impressive when the work is comprehensive and done by others! Or alternatively, the villagers themselves do the work at Government rates of pay.

167. It was obvious in 1952 that further general survey work was not practicable at this stage. Attention was, therefore, given to filling in the gaps left in the preliminary survey, one of which was a stool survey to determine the parasite rates, this being combined with a more detailed survey of nutritional defects with special reference to haemoglobin levels. The presence of hookworm, schistosoma mansonii, ascariis, taenia or amoebae was recorded. Cases that could be treated on the spot received treatment immediately and others were given a card to go to the local dispensary. At the same time any minor ailments received treatment—aspirin, cough mixture, dressings to wounds or ulcers, as the need presented.

168. There was still resistance and lack of co-operation traced back to the violation of customs and superstition. Specimens obtained might be used for making “medicine” and it was shameful to be seen in public with specimens of excreta. As the population is largely Mohammedan this latter was not surprising. Many suggestions were made by the villagers themselves which were tried out in turn but lack of co-operation produced negligible results or total failures. All possible precautions were taken regarding the separation of sexes and privacy at tables where data were recorded. After specimens were examined there followed a demonstration of the disposal by burial. Even then it was necessary to persuade dominant personalities in the village group to submit to examination and once this was achieved the others normally followed.

169. Despite the difficulties, some progress had been made and the results show an absence of amoebic infections and very low figures for the incidence of Schistosoma mansonii infections. Hookworm was fairly evenly distributed throughout but there were definite pockets of round worm infestation.

170. In conjunction with the village surveys, attention was given to the “Kwaca” (Hedge) Schools in the District. Here of course co-operation was ensured and much valuable information has been gained which is at present being analysed.

171. As mentioned in the last Report, preventive work in connection with bilharzia had been initiated on a self help basis. Attention was now paid to crossing places and ablution pools in the streams where clearing had been done and the area mapped prior to treatment of these strategic points with copper sulphate. During 1953 it is proposed to treat all such points with copper sulphate after the rains and before the next season’s rains are done. The work is being done by students from the Sanitary Assistants’ Training School.

172. It was intended to pay special attention to the incidence of tuberculosis in the Domasi Community but it has not as yet been possible to do more than tuberculin test sections of the population. The difficulties of radiological and bacteriological control of such an investigation, plus the lack of bed accommodation for proved cases, have militated against an expansion of this work. However, it is only a postponement and as facilities can be organized so the investigation will be developed.

173. Despite the difficulties the first six months of full time work have given valuable experience and information and the future pattern is beginning to take shape. It is only by experimental work of this nature in the field that techniques for local application elsewhere in the Territory can be evolved on an economic basis. Further, the value of Domasi as a training ground and propaganda must not be ignored, being as it is the site of the Jeanes School and Local Government School.

Medical Specialist

174. The Medical Specialist is based at the Zomba African Hospital where he has 35 African and Asian general beds and 35 African beds for the treatment of tuberculosis. He also undertakes the teaching of clinical medicine to the hospital assistants in training, and he is available for consultation work in the Territory as a whole.

175. This appointment has greatly strengthened the clinical services available and increasing use is being made of the consultation facilities provided. Unfortunately, the financial situation restricted the funds available for routine travelling and only emergency visits could be made to centres outside Zomba, Blantyre and Limbe. This is a matter for profound regret as the visits of the Medical Specialist to the district hospitals do much to keep up the morale of Medical Officers in these outstation posts.

176. The problem of tuberculosis, its manifestations and treatment in the African population has received special attention by the Medical Specialist during the year. Valuable clinical and statistical data have been collated and a clearer picture of the types and distribution of the disease is emerging.

177. The report of the Medical Specialist is at Appendix B.

Dental Services

178. A post for a second dental surgeon appeared in the 1952 Estimates for the first time. A temporary appointment was made during May and, as a result, the dental clinic in Blantyre opened on a full time basis. New and up-to-date equipment arrived for the Blantyre clinic and was installed during the first half of the year.

191. As in previous years it is a pleasure to record the generosity of the Nyasaland Branch of the British Red Cross Society which has continued to donate quantities of dried milk to the child welfare clinics throughout the Protectorate.

G. Training of African Personnel

192. The facilities and organization for the training of African auxilliary personnel have been referred to in some detail in previous Annual Reports. This function is considered to be one of the most important activities of the Department. Courses are maintained for the training of medical aides, hospital assistants, laboratory assistants, sanitary assistants and midwives. Government maintains Training Schools at Lilongwe and Zomba, the minimum educational qualification for entry to the schools being the Government Standard VI school certificate.

193. There has been no shortage of male candidates for training and it has been possible to select good quality men from the large number of applicants. Unfortunately, the number of Standard VI girls available for selection is small and as yet few have come forward for midwifery training. The Teaching Profession claims the majority of these girls but it will not be long before there will be a rapidly increasing number coming forward for post-primary vocational training.

The Work of the Government Training Schools

194. *Medical Aides and Hospital Assistants:* There was a total intake of 46 first year students, 21 at Zomba and 25 at Lilongwe. At Zomba 17 men and at Lilongwe 14 men entered the second year of the course. Seventeen men qualified as medical aides in October, 1952, of whom five were selected for a third year of training for the post of hospital assistant. Of the six hospital assistants who sat the examinations at the end of 1952, four qualified as hospital assistants, one was deferred for one year and one failed.

195. The most acute shortage of personnel is in the medical aide category. The out-put from Lilongwe will begin in October, 1953, but it is going to take several years before it is substantially over the normal wastage due to retirements and resignations. With this in mind the intake at each school is being raised to 25 during 1953.

196. *Sanitary Assistants:* Six men each year are accepted for this two-year course in Zomba and both classes had their full complement of students. Six men qualified at the end of 1952 and were posted as sanitary assistants.

197. Here the output is adequate for the immediate needs of the Protectorate. As there is such a grave shortage of Health Inspectors, little development work can be undertaken until more supervisory staff is available for the essential day-to-day supervision so necessary to ensure a continuation of the practical instruction and guidance of these men who are posted to the rural areas.

198. An innovation during the year was a series of lectures by senior officers to combined classes of medical aides and sanitary assistants. The aims are to stress the complementary nature of their duties and to try and obviate the minor jealousies that have existed in the past between these two categories of auxiliaries. As a first step, pay and status have been equated and it is hoped that a better understanding of the team work that is necessary will be inculcated by these steps.

199. *Midwives.* The completion of the midwives hostel at the Zomba African Hospital, already referred to in para 41, has been a big step forward, and has eased the accommodation problem at the training school for male auxiliaries by releasing a dormitory wing formerly occupied by the pupil midwives.

This year was the first one of the course for midwives, Class II, who are being trained in the English medium. The last year of the vernacular course at the Zomba African Hospital for midwives, Class III, will be 1953, when the eight girls in the second year sit their examinations in September. Three girls were admitted to the second year of the Class II course and there was a first year intake of seven girls. It is noteworthy that the majority of the pupils admitted to the first year were Nyasaland girls who had obtained their Standard VI certificates in Southern Rhodesia.

200. *Laboratory Assistants.* A course of training was started early in the year for qualified medical aides who had an aptitude for laboratory work. The course lasts for one year and consists of practical instruction designed to turn out well-trained microscopists who have a sound knowledge of "side room" work and who can undertake the greater part of the routine work at district hospitals.

The Work of the Mission training schools

201. At the Malamulo Mission of the Seventh Day Adventists there is a course of training for hospital assistants which lasts for four years, the first three of which follow the pattern of the course at the Zomba School, the fourth year is spent in special training to fit them more for medical missionary work.

202. The Church of Scotland Mission at Livingstonia runs a course for medical aides similar to that given in the Government training schools and an annual subsidy is paid for this work. There were eight medical aides in training during the year, and three passed the examinations at the end of the course.

203. The U.M.C.A. Mission opened a training school at Malindi during the year and five final-year dressers, who had received their previous training at other of the Mission Centres, attended the course.

Higher Education outside Nyasaland

204. The first Makerere medical diplomate from Nyasaland completed a year's internship at the Mulago Hospital, Kampala, and returned to take up duty as an African Medical Officer at the Zomba African Hospital. Another African male student is now in the second year of his medical course at the Johannesburg Medical School. One African woman student is studying for her B.Sc. at Fort Hare preparatory to taking up medicine. One Eurafrian woman from Nyasaland is in her second year of study at the Cape Town Medical School.

SECTION III. VITAL STATISTICS

205. The following Tables show sick, invaliding and death rates for European and African officials during 1952, together with the corresponding figures for 1951.

A. European Officials

	1951	1952
Total number of European officials resident ..	746	816
Average number resident	579.9	631.1
Total number on sick list	217	204
Total number of days on sick list ..	1,969	2,007
Average daily number on sick list ..	5.4	5.48
Percentage of sick to average number resident ..	1.56	.868
Average number of days on sick list for each patient	9.07	9.64
Average sick time to each resident	2.57	2.46
Total number invalided	1	2
Percentage of invalids to total resident	0.13	0.24
Total number of deaths	1	2
Percentage of deaths to total resident	0.13	0.244

B. African Officials

	1951	1952
Total number of African officials resident	7,837	7,908
Average number resident	7,324	7,378
Total number on sick list	841	910
Total number of days on sick list	6,766	6,681
Average daily number on sick list	18.53	18.30
Percentage of sick to average number resident ..	0.25	0.25
Average number of days on sick list for each patient	8.04	7.34
Average sick time to each resident	0.86	0.84
Total number invalided	Nil	Nil
Percentage of invalidings to total number resident ..	Nil	Nil
Total number of deaths	7	8
Percentage of deaths to total number resident ..	0.08	0.101

SECTION IV. HYGIENE AND SANITATION

206. Comment has been made earlier in this Report on the impact the financial recession has had on the preventive side of the year's work. The posts of Assistant Director of Medical Services (Health) and Chief Health Inspector were placed in abeyance; the effective establishment of Health Inspectors was four for the greater part of the year. One Health Inspector was fully occupied with the work at the training school for sanitary assistants; the other three were resident in Lilongwe, Zomba and Blantyre respectively, the latter being responsible for the work in the rural areas of the Southern Province. For part of the year he supervised the Limbe Town Council Sanitary Services as well, the post of Municipal Health Inspector being vacant for several months. Inevitably only priority work could be undertaken and little was done in the most important field of rural sanitation.

207. *Urban Sanitation.* In Blantyre where there has been continuity of tenure of office by a Municipal Health Inspector, a considerable amount of progress has been made. The existing refuse and night soil disposal services were placed on a sound footing, daily services being maintained. Inspection of meat and other foodstuffs was developed, the African market abbatoirs, butcheries, dairies and bakeries being closely supervised. It can be said that within the facilities available the Blantyre town council now has an efficient environmental hygiene service covering the areas; a great deal of expansion is still necessary and as funds become available it may be anticipated that the same standard of service will be provided to those parts of the townships not now served.

208. Limbe Town Council experienced difficulties owing to the resignation of the Municipal Health Inspector at the end of 1951 and the delay in obtaining a replacement. A new night soil disposal plant was put into use in the Kanjedza Forest Reserve but labour and supervision difficulties militated against any substantial improvement being observed. Special attention was given to water supplies and several highly polluted and dangerous boreholes were detected and dealt with.

209. The Provincial Medical Officer, Southern Province, was gazetted as Medical Officer of Health to the two townships and has maintained a close liaison with the Municipal Health Inspectors.

210. The appointment of Town Managers in Zomba and Lilongwe has taken a good deal of routine work off the shoulders of the Government Health Inspectors in these townships. As a result they have been able to concentrate more on the environmental hygiene with correspondingly good results. However, until the Central Government is in the position to make realistic grants-in-aid to the townships generally, little noticeable progress can be expected.

211. *Rural Sanitation.* Again there is no spectacular progress to report for reasons given above. However, the system of domiciliary visits by rural dispensary staff, followed up by visits by sanitary assistants who give practical advice, is being developed. The interest of Native Authorities in health problems is continuing and it is believed that it is growing.

212. Reports indicate that the campaign to improve village sanitation by the wider provision and use of pit latrines is having a good effect and year by year the situation improves, albeit slowly. Revenue from fines for the contravention of Native Authority Sanitary Rules in this connection is increasing which indicates a much more active interest in the problem, whatever the motive may be.

213. *Water Supplies.* The main work in the Mudi Dam, which will supply Blantyre and Limbe, was completed by the end of the year. The mains and the first stage of the reticulation to the townships should be completed before the end of 1953. This will mark a most notable advance towards the solution of the environmental hygiene problem in these two townships.

214. In Zomba and Lilongwe work has gone ahead on the water supply schemes; the work on the dam on Zomba Mountain is well on the way, while at Lilongwe, preliminary work has been completed.

215. At certain district headquarters small schemes have been undertaken and there has been definite progress made as the result of loan funds becoming available for this essential development.

216. *Meat and other Foods.* At the larger centres of Zomba, Blantyre and Lilongwe regular meat inspections are carried out by qualified inspectors. The following inspections and condemnations at these centres were recorded:—

			<i>Bovine</i>		<i>Sheep and Goats</i>		<i>Pigs</i>		<i>Condemnations all Townships</i>
Blantyre	..	..	2,602	..	265	..	599	Whole Carcases	.. 35
								Livers	.. 2,879
Limbe	..	..	867	..	3,104	..	43	Plucks	.. 43
								Kidneys	.. 19
Zomba	..	..	640	..	1,536	..	64	Lungs	.. 39
								Heads	.. 7
Lilongwe	..	..	819	..	796	..	56		

217. The abbatoirs at Blantyre, Limbe and Zomba are well maintained; that at Lilongwe is still very much below standard but plans are under way to rebuild the market, a new slaughter house being included in the programme of work.

218. In the majority of Sanitary Board areas slaughter poles of simple design are in use; at Mzimba a new slaughter pole and meat store was built and improvements are under way at Karonga. Development is slow, however, and until the establishment of Health Inspectors is filled and adequate travelling facilities provided, little more can be expected. Meantime, inspections are carried out by African sanitary assistants who work under the supervision of the officers in medical charge of their respective districts.

219. *Markets.* The majority of the larger markets in the Protectorate are inspected regularly by members of the Health Inspectorate and by sanitary assistants. The revenue collected in Market Fees is increasing steadily with the result that more capital expenditure has been made to improve the conditions under which food is displayed and sold. Market sanitation and the disposal of refuse have been receiving increasing attention and standards of cleanliness have been improved. Special attention is now being paid to the meat stalls and shops and, with the vector control organization developing, the fly nuisance at markets in the larger centres has been abated noticeably.

220. *African Canteens.* At markets and along the main roads these canteens are increasing in number and prove to be popular and well supported. Again sanitation is a problem but progress is being made and the standard of cleanliness in the canteens is, on the whole, relatively high.

221. *Housing.* The programme of housing for African Civil Servants has been pushed ahead and 192 permanent houses were completed during the year. The lack of housing of adequate standards in the urban areas is a most pressing social and public health problem which is receiving the urgent consideration of Government. The planning of African High Density Residential Areas is well under way and it is hoped that work may be begun during 1953 in the Blantyre and Limbe Townships. Meantime, in these two townships particularly, overcrowding presents a very serious menace to the public health.

222. *Town Planning.* The town planning of Blantyre, Limbe, Nkata Bay and Lilongwe continued and much useful preliminary work was done in respect of the two latter areas. There is a representative of the Department on the Nkata Bay and Lilongwe Committees, but as yet, none on the Blantyre and Limbe Committees.

223. *Hotels.* The licensing of hotels is controlled by Provincial Hotel Boards which meet regularly and members carry out inspections *in situ* from time to time. The increasing popularity of the shores of Lake Nyasa as holiday resorts has meant a rapidly expanding tourist traffic. The Central African Airways runs a regular weekly Viking Service to Salima during the months May to October and approximately 1,000 visitors arrived at Salima by air during the 1952 season.

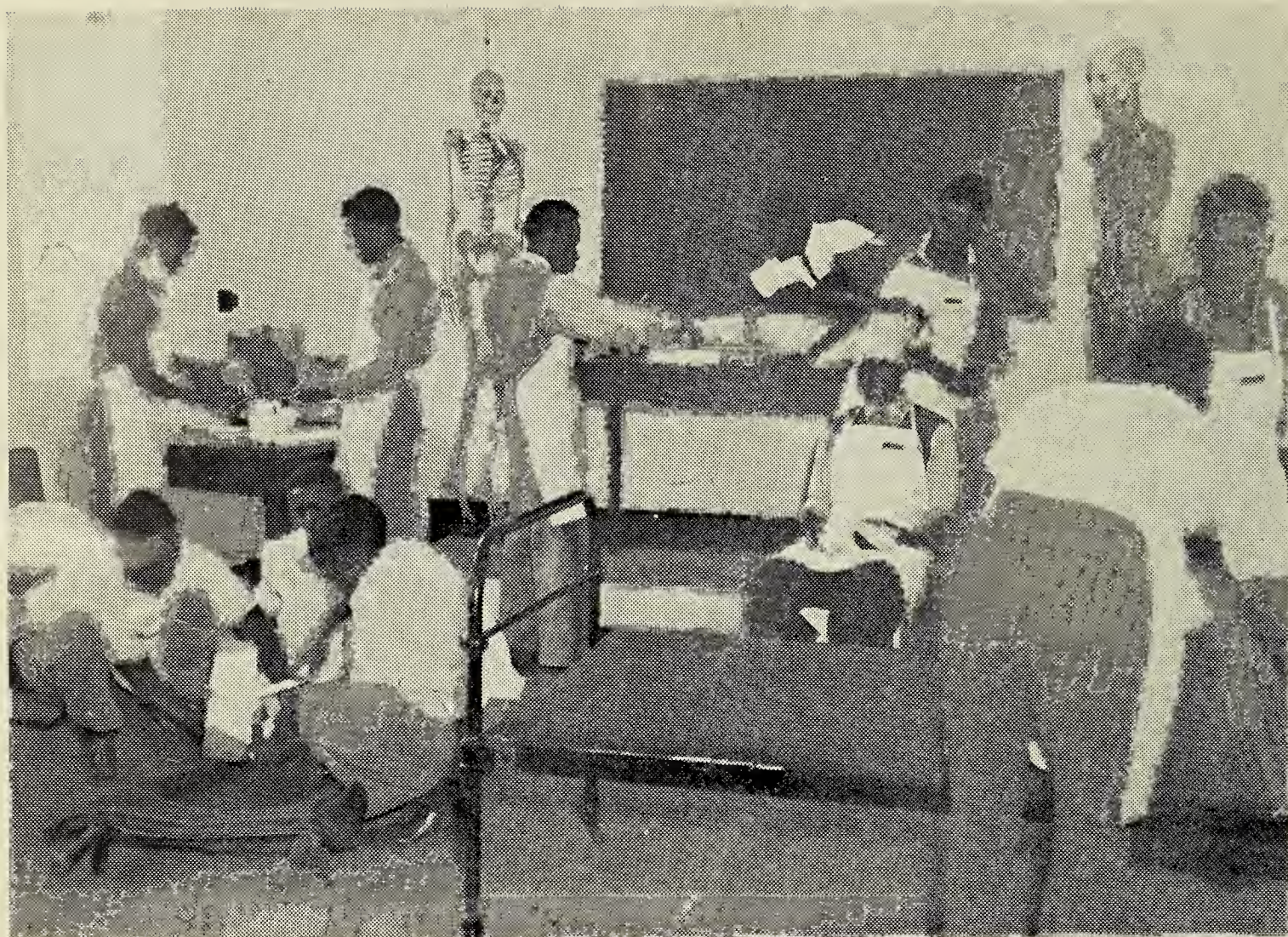
224. The licence of one Lake-shore hotel was withdrawn towards the end of the year on account of repeated delays in carrying out essential improvements necessary to compete with the increased traffic. On the whole, however, health standards were well maintained and few complaints were received.



Rural Health Work—1. Treatment



Rural Health Work—2. Domiciliary Discussion of Preventative Measures



Medical Aide Training School—Practical Instruction 1.



Medical Aide—Practical Instruction 2.

225. *Port and Railway Health Administration.* The Nyasaland Railways maintained its own health service during the year, under the direction of the Chief Medical Officer in Limbe. There were no outbreaks of epidemic disease although sporadic cases of small-pox occurred at the Lake port of Chipoka. These cases occurred amongst Africans returning from territories further south who had travelled by rail as far as Chipoka and were there awaiting steamer transport to ports further north. The Government Health Authorities dealt with these cases and no secondary cases were reported.

226. The arrival of new passenger rolling stock has greatly improved the health safeguards and comfort on the journey from Beira.

227. No restrictive measures had to be placed on rail or steamer traffic during the year.

228. *Air Services.* Prior to the introduction of the International Sanitary Regulations, 1952, modifications were necessary to the Blantyre (Chileka) airport buildings. A direct transit area was established and certain other buildings modified to meet the requirements of the new Regulations. All buildings within the perimeter of the airport are treated regularly with insecticide and a close sanitary control maintained of disease vectors.

229. During the year the W.N.L.A. established a system of transport of mine recruits by air from Lilongwe to Francistown in the Bechuanaland Protectorate. In consultation with the Governments concerned, health safeguards were agreed upon and introduced.

230. *Vector Control.* The year marked a steady improvement in the quality of this service and it was expanded to cover stations in the Northern Province. Experimental work continued in the Chiromo District of the Lower River where a Sanitary Board area and the villages around its perimeter are being treated regularly with gammexane.

231. With practice, the teams engaged in this work are becoming more proficient in the application of insecticides and operating costs have been correspondingly reduced. Equipment ordered during 1950 arrived early in the year and, as a result, the organization is now on a reasonably sound footing.

232. *General.* The practical work at the Sanitary Assistants' training school in Zomba was developed more intensively and this activity continues to have priority. Demonstrations were given at Agricultural Shows and exhibits staged which attracted considerable interest. The staff of the school compiled a playlet which can be adapted to illustrate the cause, effects and control of the major endemic diseases and the students displayed much histrionic talent in their interpretation of the subject. The first performance was staged at the Southern Province African Provincial Council meeting and it was well received and stimulated intelligent questions and comments.

233. Lectures on health topics were given at the Local Government school at Domasi and the students attending the course visited the Sanitary Assistants' school to see demonstrations of simple measures that can be used by Native Authorities to control the breeding of flies, mosquitoes and snails.

234. Vaccination against smallpox was carried out in strategic areas, the largest single campaign being carried out in the Blantyre and Limbe townships and the surrounding peri-urban areas. The campaigns in recent years have been on a reduced scale but it is believed that efficiency has been increased by more careful planning and the use of better trained vaccinators who are members of the permanent staff.

235. Again it is right to record an appreciation of the work of the depleted Health Inspectorate and their African Staff. The quality and quantity of the work done under difficult conditions is in itself a tribute to the energy and competence of those who have done so much, so cheerfully, with so little.

SECTION V. PRISONS AND ASYLUMS

236. *Prisons.* Medical inspection of all prisons in the Protectorate is carried out on frequent and regular intervals. There were no epidemics during the year and the general health of the prisoners was good. The daily average number of prisoners in all prisons was 952.43, an increase of 42.43 over the previous year. The daily average number of prisoners on the sick list was 21.42; there were 365 admissions to hospitals. Deaths in prisons numbered 15, of which five were by judicial execution.

237. *Central Prison and Prison Farms, Zomba.* The daily average number of prisoners detained was 647.94. The prison hospital of 14 beds accommodated 310 prisoners during the year; ten females were admitted to the Zomba African hospital and 85 males were also transferred from the Prison hospital for treatment. The daily average number of prisoners in Zomba hospitals throughout the year was 10.01. The number of prisoners treated as out-patients at the Prison hospital was 5,378, of whom 238 were females. There were 12 deaths, all males, of which five were due to judicial execution. The causes of death were:—

Pneumonia	..	..	2
Syphilis	..	..	1
Abscess of lung	..	..	1
Pericarditis	..	..	1
Uraemia	..	..	1
Pleurisy	..	..	1

238. The hospital is in charge of a senior medical aide assisted by a warder who has a knowledge of elementary nursing; trusty prisoners are detailed for duty as ward orderlies. The Medical Officer i/c of the Zomba African hospital visits the prison three times each week or more frequently as the need arises. At the Prison farms there is a dispensary in charge of a medical aide.

239. A check is kept on the health of the hard labour prisoners in Zomba by means of monthly weighing. The laboratory investigation of all new admissions was started in September; blood films are examined, the Kahn test carried out and stools and urine investigated for parasites.

240. *Mental Hospital.* The full report by the Medical Officer in charge is at Annexure "C". This is a most encouraging report and well reflects the benefits of the positive approach to the care of mental patients and the abandonment of the Lunatic Asylum concept. Despite delays and staff shortages the organization of the new system has gone ahead smoothly. Consolidation can only be effected when the patients are transferred to the new Mental hospital and it is believed that this move will take place towards the end of 1953.

241. The daily average of in-patients was 148.9 and average out-patient attendances was 5.04, of whom .59 were females. Details of admissions, discharges and deaths are set out in the following Table:—

<i>Committed under Criminal Procedure Code</i>	<i>On Roll at 31-12-51</i>			<i>Admitted during 1952</i>			<i>Discharged during 1952</i>			<i>Died</i>		<i>On Roll at 31-12-52</i>	
	M	F	..	M	F	..	M	F	..	M	F	M	F
	16	1	..	1	—	..	—	—	..	1	—	16	1
Guilty but insane ..	16	1	..	1	—	..	—	—	..	1	—	16	1
Unfit to plead ..	24	3	..	4	2	..	2	1	..	—	—	26	4
Admitted under Reception Order or 30 days' Order	90	12	..	36	9	..	33	6	..	5	—	88	15
TOTALS ..	130	16		41	11		35	7		6	—	130	20

Causes of Death: Pulmonary tuberculosis 1
Cancer of bladder 1,
Sub-acute necrosis of liver 1
General paralysis of the insane 1
Chronic nephritis 1
Abscess of lung 1.

242. The Visiting Committee appointed by His Excellency the Governor, under section 4 of the Mental Treatment Ordinance, met once each month to inspect the Hospital and to review the condition of the patients under detention. The cases of all new admissions are reviewed during these visits and recommendations made as the Committee may deem necessary. Visits are also made by-individual Committee members at frequent intervals.

Acknowledgment

243. A sincere tribute is paid to the hard work, enthusiasm and loyalty of the whole staff of the Department. They have worked together as a team and any advance that has been achieved is entirely due to their efforts. An acknowledgment is also made of the helpful co-operation of the other departments of Government who have given generously their help and co-operation in the work of the year.

D. J. M. MACKENZIE
Director of Medical Services

REPORT OF THE MEDICAL LABORATORY 1952

DR. R. B. BAIRD, M.B., Ch.B., M.R.C.P. (Edin.)

ADMINISTRATION

The Pathologist was absent on vacation leave from May to November. During his absence Dr. H. I. Goodall acted in his place.

Mr. H. Thorburn, Laboratory Technician, who was working part-time only from the beginning of the year, returned to full duty on 1st April. Mrs. A. Thorburn continued to be employed on a temporary basis throughout the year.

Mr. Y. P. Kamange, Senior Hospital Assistant was promoted to the Executive Division in January.

One Medical Aide Laboratory Assistant was posted temporarily to Chikwawa in June to assist with survey work. He returned in November to the laboratory.

BUILDING

The only building undertaken during the year was the erection by the Health Inspector, Zomba, of a lean-to shelter with cement floor. This was to provide protection against the weather for caged laboratory animals. The results in the general well-being of the animals has fully justified the outlay.

TRAINING

The hospital assistants' class was instructed in simple laboratory diagnostic techniques and their significance and interpretation. In addition each member of the class spent at least one month assisting in the routine work of the laboratory, so that experience in the practical conduct of these techniques could be obtained.

The first course of training for laboratory assistants finished in April when an examination was held. Seven candidates sat; of these three passed, one failed and three were deferred for six months. Two of those deferred re-sat in December when both passed; the third had meanwhile been dismissed.

It should be understood that the standard of this course is not high; its purpose is to provide as quickly as possible sufficient laboratory assistants to be able to post one to each district at least, who will be able to perform simple microscopy and "sideroom" methods with reasonable accuracy and reliability. Even so, as accommodation in the laboratory and difficulties of housing limit the number who can be trained at a time, and as a year is the minimum period necessary to reach this standard, it will be a number of years before this aim can be achieved. Meanwhile, however desirable a higher standard may be, it could only be obtained by prolonging the course and consequently reducing the intake. The only other alternative would be to engage as trainees persons of higher educational attainment than Standard VI, for at present a considerable part of the year's training is occupied in instruction in the basic sciences and arithmetic. If this knowledge could be assumed, then a higher standard of specialized training could probably be attained in a year.

WORK OF THE LABORATORY

Lymph issued during 1952:—

To Nyasaland	..	..	..	422,000 doses
To Southern Rhodesia	..	..	..	230,000 doses
			TOTAL	652,000 doses
Number of calves vaccinated	..	..	63	
Total yield of lymph pulp	..	..	3,090 grams.	= 925,000 doses approximately
Average yield per calf = 49 grams.				

Balance of lymph in hand at 31st December, 1952:—

Unprocessed pulp	..	..	..	334.1 grams.
Processed pulp	..	..	..	2,172 ml.

As compared with 1951 the yield of lymph pulp per calf has nearly doubled. This is due in part to a supply of calves of more suitable age from the Prison farm at Pyupyu, but mainly to the improvement in the quality and potency of the seed lymph by repeated passage through rabbits. For the same reason the potency of the lymph issued is considerably greater, this resulting in a product with improved keeping qualities.

As mentioned, in the main body of the Report, for the last seven months of the year the Southern Rhodesian Government has purchased its vaccine lymph from this Department, and has expressed its complete satisfaction with it.

One disturbing feature with regard to vaccine lymph production has been our inability to build up sufficient reserve stocks, this in spite of the fact that no smallpox outbreaks occurred during the year which might have resulted in extraordinary demands. It is one of the first duties of a lymph producing

establishment to hold such stocks against emergency, but we have only been able to manufacture in excess of demands by a small margin. This has been due in the main to shortage of skilled technical staff, and to a lesser extent to shortage of suitable calves. A second European technician has been provided for in the 1953 Estimates and should he be appointed the main difficulty should disappear. The second difficulty, with the ready co-operation of the Prisons Department, can and will be resolved as their herd increases.

During his leave, the Pathologist, with the invaluable assistance of the staff of the Crown Agents for the Colonies, negotiated with various firms for the purchase of equipment to be used in the manufacture of lanolinated lymph. This product is easier and cleaner to use and to transport and there is also evidence to indicate that it is more resistant to tropical temperatures than the glycerolated lymph as is made at present. At the same time orders were placed for the supply of materials and equipment for the improved storage and transport of lymph. The apparatus is expected to arrive early in 1953.

INTRAVENOUS INFUSION FLUIDS

During the year 698 pints of sterile glucose saline for intravenous infusion were made and distributed to the hospitals in the Protectorate. No untoward reactions have been reported.

This amount represents practically the maximum production limit of the laboratory with present staff, equipment and accommodation. The potential demands for this valuable therapeutic agent are, however, much greater than this, and it is hoped that means may be found to increase production.

ROUTINE WORK OF THE LABORATORY

Apart from the manufacturing side described above, a total of 42,408 specimens were examined in the laboratory during the year. This is an increase of 27 per cent. on the figures for 1951 and is almost exactly double those for 1948 which recorded the maximum number in any year up to 1951. A summary of this work appears at the end of this section. Comment on its more important features will be made here.

Trypanosomiasis. Following a report that two individuals in the Chikwawa District had been contacts of a case of trypanosomiasis, Dr. Graham carried out a survey in that District in May, 1952. Blood films were taken from adults and children in various villages and in Chikwawa hospital and the films were sent to this laboratory for examination. Films from the original two contacts proved to be negative, but one film, that of an adult male under treatment for hookworm in the hospital, showed the presence of trypanosomes. A considerable number were positive for microfilariae. At a later date the Sub-Assistant Surgeon, Chikwawa, forwarded some further films, one of which showed trypanosomes.

In July, Dr. Hardman spent a few weeks in the Chikwawa District carrying out a more extensive survey. Dr. Hardman took three guinea pigs with him, and, on finding cases of trypanosomiasis, he injected them intraperitoneally with 1 ml of the patient's blood. The guinea pigs were then returned to the laboratory.

Two further cases of trypanosomiasis were discovered, one that of a woman who was very ill and subsequently died. Of the three guinea pigs, two survived for just under one month; the third, having survived for three months, was sent, along with another which had received a sub-inoculation of blood from one of the first two just before its death, to the South African Institute for Medical Research for further investigation. Blood films from all three pigs showed enormous numbers of trypanosomes.

PUBLIC HEALTH

Water examinations. Ninety-four samples of water were examined bacteriologically during the year. The majority were from Blantyre and Limbe municipalities, who submit samples regularly for routine checking. The supply to the former town has remained, on the whole, bacteriologically satisfactory, but samples from the latter, the water supply of which consists of a number of boreholes, public and private, scattered through the town, have frequently shown evidence of faecal pollution.

Twenty-seven samples of bovine blood and seven milk samples were examined at the request of the Veterinary Department for evidence of contagious abortion. All were negative.

Milk Supply. Towards the end of the year facilities became available at the laboratory for the routine testing of milk samples. It is hoped that full use will be made of this.

Clinical Bacteriology. There still seems to be some reluctance on the part of Medical Officers to make use of the laboratory in the diagnosis of bacterial infections, as is shown in the paucity of examinations of this nature requested. While this is no doubt partly due to the increased use of antibiotics with a wide spectrum of antibacterial activity, this lack of bacteriological diagnosis, where possible, is regrettable. For not only may the indiscriminate use of these same antibiotics give rise to resistant strains of organisms which without laboratory control may be undetected, but lack of identification of bacterial species deprives us of the basic knowledge on which a Public Health Service is based.

A small outbreak of bacillary dysentery occurred in Zomba during the hot months, the organism being mainly *Sh. sonnei* although a considerable number of Flexner infections also were found. The dysentery was of a mild nature and affected mainly the African community.

Only 38 throat swabs were examined from three of which diphtheria bacilli were isolated. An interesting feature, which has been noted elsewhere in tropical Africa, is the comparative rarity of haemolytic streptococcal throat infections.

Enteric infections appear to be rare in the Zomba area, only one being confirmed in the laboratory during the year.

Dark ground examinations for *T. pallidum* have been performed with increasing frequency during the year. Since the organization of a venereal disease clinic in the African hospital, Zomba, a laboratory assistant has been in attendance to perform these and to examine urethral smears.

The Kahn test continues to be the standard serological test for syphilis used in this country.

PARASITOLOGY

Malaria. 10,523 slides, excluding those from the Chikwawa surveys, were examined, and in 27 per cent. of these malaria parasites were found. The great majority of these were from patients attending the African hospital, Zomba. There was some seasonal variation in incidence as shown by the following table:—

Month			Total Slides		Malarial Parasites		Percentage
January	..	..	729	..	274	..	37
February	..	..	1,160	..	268	..	23
March	..	..	1,274	..	335	..	25
April	..	..	957	..	297	..	30
May	..	..	878	..	184	..	22
June	..	..	656	..	189	..	28
July	..	..	675	..	182	..	27
August	..	..	665	..	213	..	32
September	..	..	821	..	183	..	22
October	..	..	930	..	183	..	20
November	..	..	670	..	203	..	30
December	..	..	1,108	..	360	..	32

The ages of the patients were not recorded, nor was species identification of the parasites practiced consistently throughout the year. It will be noted that the second highest parasite rate occurred in August—a dry month and that at no time did the rate fall below 20 per cent.

It is not suggested that these patients represent a random sample of the population or that these parasite rates can be taken as applying to that population as a whole, for such cases are of necessity selected. They are given in the hope that they may provide an instructive comparison with the results of parasite surveys where random sampling is practised. In fact, the results of two such surveys are known, viz., the Domasi survey made in the early months of 1951 when 18 per cent. of all slides examined were positive and the results of examination of admissions to the Central Prison, Zomba, who were afebrile; when 10 per cent. positives were found in 1952, as is reported separately by the Medical Officer in charge. While not strictly comparable one conclusion seems inescapable; in the adult African there is considerable doubt with regard to the value of the blood slide as sole evidence of the diagnosis of a fever as malaria. Further work on this is required.

Amoebiasis. There was a considerable increase in the number of cases where *E. histolytica* trophozoites and cysts were found as compared with 1951. These are not, however, a fraction of the numbers reported in earlier years, and amoebiasis cannot be said to constitute a major problem at the present time.

Intestinal Worms. The hookworm is the only helminth of major importance in the Zomba area, no other being found with greater frequency than 1.4 per cent. of stools examined.

Urinary Bilharzia. 21 per cent. of all urines examined microscopically and 24 per cent. of urines from African patients were found to contain ova of *S. haematobium*. As in malaria there is a distinct seasonal incidence in this disease.

Month			Total African Urines		<i>S. Haematobium</i>		Per cent. Positive
January	..	..	490	..	96	..	19.6
February	..	..	493	..	100	..	20.3
March	..	..	476	..	80	..	16.8
April	..	..	476	..	69	..	14.5
May	..	..	541	..	129	..	23.9
June	..	..	390	..	88	..	22.6
July	..	..	416	..	125	..	30.0
August	..	..	425	..	114	..	26.8
September	..	..	562	..	149	..	26.5
October	..	..	688	..	198	..	28.8
November	..	..	594	..	160	..	27.0
December	..	..	571	..	137	..	24.0

It will be noticed that in this disease the maximum number of cases harbouring the parasite were found in the dry months, July to November, and the minimum in March and April, at the end of the rains. Allowing for the usually accepted period of six weeks from cercarial invasion of the body to the appearance of eggs in the urine, the latter may be due to the flushing out of streams during the rainy season. The variation in incidence also suggests that freshly infected cases are more prone to attend hospital than those of longer standing.

These figures serve to show the value of parasite surveys before attempting any control measures in order to assess the optimum time to conduct these.

SUMMARY OF ROUTINE WORK

Bacteriology

SPECIMEN		PATHOGENS ISOLATED						Total EXAMINED
Facces (culture)	346
			<i>Sh. sonnei</i>	..	..	30	
			<i>Sh. flexneri</i>	..	..	29	
			<i>Sh. schmitz</i>	..	..	3	
			<i>Sh. boyd</i>	..	..	1	
Urines (culture)	58
Pus	25
Throat swabs	38
			K.L.B.	..	..	3	
			Vincent's organisms	..	..	3	
			<i>Staphylococci</i>	..	..	12	
			<i>Haemolytic streptococci</i>	..	..	2	
			<i>Nonhaemolytic streptococci</i>	..	..	2	
			Blood cultures	..	..	..	..
			<i>S. typhi</i>	..	..	2	
			(Both from same patient)	1		31
			<i>Nonhaemolytic streptococci</i>	..	..	1	
			<i>Staph. aureus</i>	..	..	2	
			Cerebro-spinal fluids Microscopic exam. only	..	..	..	..
			Cultured	..	..	..	..
			<i>Pneumococci</i>	5		14
			<i>Staph. aureus</i>	..	..	1	
			Ascitic and Pleural fluids	..	..	..	..
Sputa	20
			<i>Tubercule Bacilli</i>	..	..	265	
Skin snips	47
			Acid fast bacilli	..	..	7	
Urethral/Vaginal smears	677
			<i>Gonococci</i>	..	..	367	
Dark ground examination of chancre fluid	154
			<i>Treponema pallidum</i>	..	..	92	
Water examinations	94
Miscellaneous	21

Serology

Kahns	..	..	..	..	..	..	..	7,932
			Negative	..	..	5,747		
Agglutination tests	..	..	..	..	..	..	..	105
Widals	..	..	..	..	..	..	..	105
Weil-Felix	..	..	..	..	..	..	..	3
Abortus	..	..	..	..	..	..	..	31

Biochemistry

Fractional test meals	..	..	..	..	..	..	..	36
Blood ureas	..	..	..	..	..	..	..	113
Kidney function tests	..	..	..	..	..	..	..	4
Blood sugar estimated	..	..	..	..	..	..	..	15
,, ,, curves	..	..	..	..	..	..	..	5
Urine sugar (quantitative)	..	..	..	..	..	..	..	2
Van den Bergh	..	..	..	..	..	..	..	12
Prothrombin time	..	..	..	..	..	..	..	3
Serum proteins	..	..	..	..	..	..	..	20
Colloidal gold curves	..	..	..	..	..	..	..	9
Blood uric acid	..	..	..	..	..	..	..	4
“Routine” chemical examination of urine	..	..	..	..	..	..	..	2,100

Haematology

Haemoglobin est.	..	..	..	..	..	..	..	1,249
Erythrocyte counts	..	..	..	..	..	..	..	227
Leucocyte counts	..	..	..	..	..	..	..	1,136
Differential leucocyte counts	..	..	..	..	..	..	..	679
Erythrocyte sedimentation rates	..	..	..	..	..	..	..	1,916
Packed cell volume	..	..	..	..	..	..	..	34
Reticulocyte counts	..	..	..	..	..	..	..	3
Marrow punctures	..	..	..	..	..	..	..	2
Spleen punctures	..	..	..	..	..	..	..	1
Blood group determinations	..	..	..	..	..	..	..	230

<i>Histology</i>								
Total specimens examined	..	..	..	..	..	..	..	169
The following tumours were found:—								
Epithelioma of skin	..	..	..	..	..	..	..	12
„ of vagina	..	..	..	..	..	..	..	1
Malignant papilloma	..	..	..	..	..	..	..	1
Cystic basal cell carcinoma		..	..	..	..	..	..	1
Carcinoma of cervix	..	..	..	..	..	..	..	1
„ of breast	..	..	..	..	..	..	..	4
„ of breast secondary in Lymph gland		..	..	..	..	..	..	1
„ of prostate	..	..	..	..	..	..	..	1
„ of oesophagus		..	..	..	..	..	..	1
„ of thyroid	..	..	..	..	..	..	..	2
„ in lymph gland, origin unknown			..	..	..	..	..	2
Mixed parotid tumour	..	..	..	..	..	..	..	2
Adenomyoma of uterus	..	..	..	..	..	..	..	1
Adenoma	..	..	..	..	..	..	..	1
Papilloma	..	..	..	..	..	..	..	2
Cystadenoma	..	..	..	..	..	..	..	1
Fibroadenoma of breast		..	..	..	..	..	..	2
Lympho-epithelioma	..	..	..	..	..	..	..	1
Sarcoma	..	..	..	..	..	..	..	4
Fibroma	..	..	..	..	..	..	..	2
Fibro-lipoma	..	..	..	..	..	..	..	1
Synovioma	..	..	..	..	..	..	..	1
Melanoma	..	..	..	..	..	..	..	1
Haemangioma	..	..	..	..	..	..	..	7
Sclerosing angioma	..	..	..	..	..	..	..	1
Lymphangioma	..	..	..	..	..	..	..	1
Hodgkin's disease	..	..	..	..	..	..	..	1
Teratoma	..	..	..	..	..	..	..	1
Chorion-epithelioma	..	..	..	..	..	..	..	1
Undifferentiated malignant tumours		..	..	..	..	..	..	3
<i>Parasitology</i>								
Blood films	..	..	..	..	..	..	..	10,523
(excluding Chikwawa Surveys)								
			Malarial parasites in	..	2,871			
			<i>T. duttoni</i>	..	49			
Blood films from Chikwawa Survey	..	..		..	..	..	..	220
			Trypanosomes	..	4			
			Microfilariae	..	33			
Faeces	..	..	..	..	..	..	..	6,273
			Hookworm	..	1,255			
			Ascaris	..	64			
			<i>S. mansoni</i>	..	94			
			<i>S. haematobium</i>	..	4			
			Threadworm	..	38			
			Whipworm	..	2			
			<i>T. Saginata</i>	..	6			
			<i>Hymenolepis diminuta</i>	..	3			
			<i>E. histolytica</i> Trophozoites	..	8			
			Cysts	..	19			
Urines	..	..	..	..	..	..	..	6,739
			<i>S. haematobium</i>	..	1,445			
<i>Medicolegal Examinations</i>								
Autopsies performed at the request of the coroner	..	..	..	..	..	..	..	33
Examination of exhibits for human blood stains	..	..	..	..	..	..	..	11
Examination of exhibits for seminal fluid stains	..	..	..	..	..	..	..	2
Chemical examinations—Suspected poisons	..	..	..	..	..	..	..	2
Blood alcohol estimations	..	..	..	..	..	..	..	5

REPORT OF THE MEDICAL SPECIALIST

By

J. W. D. GOODALL, M.D., F.R.C.P., *Medical Specialist*

INTRODUCTION

During 1952 I did not tour in Nyasaland owing to financial stringency. However, weekly visits were made to Blantyre and on five occasions I flew up to Lilongwe for consultations. I hope to resume visits to out-lying hospitals when funds become available. My weekly visits to Blantyre were always interesting and busy. Apart from the European and African hospitals, the Church of Scotland Mission hospital was visited on request.

Consultations by Appointment

During the year my consultations (new cases) amounted to 478. These were made up as follows:—

Zomba European hospital	..	..	..	53
Zomba African hospital	..	..	..	174
Blantyre European hospital	..	..	..	131
Blantyre African hospital	..	..	..	110
TOTAL				468

Among the European patients the women and children out-numbered the men considerably. As is usual in most semi-tropical countries, an element of psychological upset was present in many of these cases. However, there was plenty of organic disease too, ranging from congenital heart disease to amoebic abscess of the liver. An African Chief came down from the north to see me with a small army of followers. The man had Huntingtons chorea for which, of course, there is no cure.

IN-PATIENTS

Previously I used to have charge of 32 African and three Indian beds, but owing to a very heavy influx of tuberculous patients, I took over an extra ward and for the greater part of the year some 70 patients were under my immediate care. This was too many I think as it interfered with my available time for consultations. The female beds were always over-crowded and this was partly due to the African habit of entering hospital “ *en famille* ”, i.e., mother, babies and “ granny ” made a very common appearance as a unit in my wards. It would have been difficult to refuse admission on the grounds that all of them were not ill, since very few indeed were free from parasites of some kind.

Exclusive of Asians and people of mixed blood, there were 528 Africans in my wards during the year. By far the commonest disease was malaria. An attempt to classify the type of malaria was made, and to get blood films taken in all cases before commencing treatment. Of total of 111 malaria cases, 27 were due to *Plasmodium falciparum* infection, seven to *plasmodium vivax*, and the remainder were unclassified. Malarial patients in Nyasaland presented a different clinical picture to what I have seen elsewhere, and seldom, if ever, had rigors or drenching sweats.

In addition to malaria the other common diseases were schistosomiasis (20 cases), respiratory diseases such as pneumonia (36 cases), anaemia (24 cases) and hookworm (21 cases). There were 15 cases of syphilis and 106 cases of pulmonary tuberculosis. Inflammations of the eye totalled 23 cases, mainly conjunctivitis, but corneal ulceration iritis and trachoma were also seen. Other small groups of diseases were as follows:—

Gastro-enteritis	..	..	..	..	11 cases
Nephritis	..	..	..	..	9 „
Pleurisy with effusion	..	..	..	..	9 „
Heart Diseases (congenital, syphilitic and rheumatic)	..	..	..	..	8 „
Psychoneuroses	..	..	..	..	8 „
Amoebiasis	..	..	..	..	6 „
Non-pulmonary tuberculosis	..	..	..	..	10 „
Relapsing fever	..	..	..	..	5 „
Whooping cough	..	..	..	..	5 „
Primary carcinoma of the liver	..	..	..	..	4 „
Pericarditis	..	..	..	..	2 „

DEATHS

As in previous years comparatively few deaths occurred in hospital due to the practice of removing those unlikely to recover in order that they may die at home. The following patients died in my wards during 1952.

Female aged	5	..	..	..	Pneumococcal meningitis
Male	„	20	..	..	„ „
Male	„	23	..	..	Nephritis and uraemia

Male	„	30	..	..	..	Nephritis with anasarca
Female	„	43	..	..	..	Snake bite
Female	„	26	..	..	..	Ruptured ectopic gestation (following operation)
Male	„	24	..	..	..	Pericarditis
Male	„	2	..	..	..	Gastro-enteritis
Male	„	35	..	..	..	Malignant ulcer of groin
Female	„	11 days	..	..	..	Tuberculosis of lungs and spine
Male	„	10	..	..	..	Diabetes mellitus
Male	„	20	..	..	..	Pneumonia
Male	„	43	..	..	..	Gangrene of mouth
Female	„	4	..	..	..	Gangrene of jaw
Male	„	26	..	..	..	Leukaemia (myeloblastic).

Several other cases of pneumococcal meningitis were seen under the care of Medical Officers. It remains a very killing disease in spite of treatment with sulphonamides and penicillin intrathecally. Doses of penicillin in excess of 25,000 units intrathecally produced convulsions on more than one occasion and death occurred in one adult male (not recorded) following an intrathecal injection of 100,000 units of penicillin.

Tuberculosis

One European male continued to have refills of his pneumothorax throught the year. He has since returned to the United Kingdom where the lung was allowed to expand, and the cavity was found to have healed. Among Africans and Indians there were 106 new cases of pulmonary tuberculosis admitted during the year. By far the commonest type of case was one in which there were bilateral cavities with some acute exudative areas as well. Approximately 80 per cent. of cases were infective with positive sputa. The majority of these patients came from the Southern Province, but about a quarter came from the Northern and Central Provinces, Tanganyika and Portuguese East Africa. As regards occupations, the largest proportion of cases was youths undergoing school instruction, clerks in Government offices, domestic servants and agriculturalists. School teachers provided 4 per cent. of my cases. A disturbing feature was the number of cooks and domestic servants who were infective. One patient was a “ *Mwana Boy* ” (nurse) employed by an European family.

Treatment in 10 per cent. of cases was by means of artificial pneumothorax and pneumoperitoneum. About 8 per cent. of cases after discharge continued to attend for periodic check-up. Isonicotinic acid hydrazide was a great boon. Without exception all patients treated with this drug improved, though many became resistant after two or three months. Latterly this drug was combined with streptomycin as a routine treatment. Under this regime no patients died, though many remained with infective cavities and constitute a grave public health problem.

TREATMENT ROOM

Emergency lighting was provided for this room during this year. It has continued to be the centre of minor procedures such as sigmoidoscopy, artificial pneumothorax and dark-room work. In spite of a keen search, comparatively few cases of amoebiasis or rectal bilharzia were found at sigmoidoscopy.

TEACHING

A clinic was held twice weekly for third-year trainees. The main emphasis was on methods of examining patients and how to recognize and treat the commoner diseases. The standard of the new entrants has improved since last year.

RESEARCH

Careful records of all tuberculous patients were kept during the year. These records added to those kept in previous years contained notes of nearly 200 cases. A study of isonicotinic acid hydrazide alone, and in combination with other drugs was made during the year and I hope to publish my results in due course.

MENTAL HOSPITAL ANNUAL REPORT

By

W. H. WATSON, M.D., *Medical Officer i/c, Mental Hospital, Zomba*

PART I

BUILDINGS

After a stoppage of one year, work was restarted on the new Mental Hospital in April and, by the end of the year, the roofs were on the additional four blocks required to complete the hospital.

Water but not light or power, was laid on by the middle of the year to the following places at the new Hospital.

- Administrative block;
- Observation block;
- Sick bay;
- Patients' blocks 1 and 2.

The sprays in the ablution rooms were much appreciated by patients. Some of the patients, however, took some time to become accustomed to the use of water closets; apparently they found the automatic flush a bit disconcerting. It is not proposed to do away with the pit latrines until the P.W.D. finish building as they serve a useful purpose with so many workmen about.

HOUSING

Work has not yet started on the new housing scheme for the staff and there is an acute shortage of houses. A row of five brick houses with thatched roofs for female attendants was burned down on Christmas Eve, 1951, and has not been rebuilt and these females, the hospital assistant and five other attendants occupy quarters in blocks (2) and (3) of the new hospital. Six attendants live in their villages.

GROUNDS

In January a belt of pine trees was planted as a screen between the small European block and the right of way which passes alongside it. This right of way is a nuisance but, as it is the old *machila* road to Blantyre, it is a busy African thoroughfare and it would be futile to attempt to close it.

Fruit trees—peaches, citrus and mangoes—were planted in January in the area in front of the main entrance to the new hospital. In March a nursery of 120 avocado pears was started and the young trees were planted out in December.

Some highly decorative trees which grow quickly to a great height and produce a striking yellow efflorescence were planted at a considerable distance from each other in the large grassed area in front of the hospital. They will form a future landmark. This tree would appear to be a peculiarly appropriate one for a mental hospital, its botanical name being *Schizolobium excelsum*.

During the dry season an area on the west side of the new hospital was cleared and stumped for use as a football field and in December it was planted up with short grass. The land on three sides of the European block was cleared and planted in grass.

The Department of Surveys completed a contour map of the "policies" of the hospital which amount to 97 acres.

STAFF

Mr. J. Fox, who was seconded from the Prison Department, proceeded on leave, pending retirement, in January. He has not been replaced and this has meant that the Medical Officer has not been able to devote as much time to the purely medical side of the work as was possible in 1951. The African staff situation is greatly improved. The old warder-like attitude towards patients is a thing of the past and it is now many months since a whistle was blown for help in dealing with a difficult patient.

PART II

This is the second year the Medical Department has been responsible for the Mental Hospital. In the first year an attempt was made to apply the known principles of the treatment of the insane so far as they could be applied by a medical staff of one doctor, two hospital assistants and one medical aide. As might be expected the most positive results in the first year were not in the psychiatric sphere but in the somatic. The death rate fell from an average of 23 per annum in 1949 and 1950 to three deaths in 1951, while admissions numbered 47 with only 16 discharges in 1951. Out of this situation arose the very natural fear that an acute accommodation problem would have to be faced in 1952 before the new hospital was completed. Throughout 1952 the accommodation problem has indeed been acute with a waiting list practically the whole year, but it has not proved so bad as was expected as the following figures for 1952 show.

Admissions numbered 52 (41 males, 11 females), the highest figure ever recorded and representing an intake of over one-third of the daily average in-patient state of the hospital which was 148.9 for 1952. Discharges, however, rose compared with 1951 and numbered 42 (35 males, seven females). There were six deaths, all amongst males. The year therefore ended with only four patients in excess of the number in hospital at the beginning of the year. While it is hoped that this increased rate of discharge is a good augury for the future when the better facilities of the new hospital become available, it must be pointed out that the considerable pressure of some importunate officers of various departments, including

the Medical Department, was a most effective spur to the medical officer to discharge patients and accept new ones. It is therefore possible that, by permitting his official sympathy to overrule his psychiatric judgment on occasions, the Medical Officer has laid himself open to a high relapse rate amongst those patients who were discharged not cured, but fit to go home to be cared for by their relatives.

The expected completion of the new hospital in 1953 and the setting up of security *cum* observation wards for the insane at selected district hospitals should effectively deal with the dissatisfaction in the districts over the lack of accommodation, but there still remains the awkward fact that the number of patients is rising and is likely to continue to do so despite improved methods of treatment.

The following table shows how long each of the discharged patients had been in hospital and it is gratifying to note that some old standing cases have improved and even been cured. The oldest inhabitant of the hospital, admitted in 1922, who was a cantankerous, combative old gentleman up to 1950, has now calmed down into a modest grumbler when things go wrong and an attempt is being made to locate his relatives.

No. of years in hospital ..	..	1	..	2	..	3	..	4	..	5	..	6	..	7	..	8	..	9	..	10
No. of discharges ..	..	29	..	5	..	0	..	1	..	1	..	3	..	0	..	1	..	0	..	2

Admissions during 1952 confirm that *schizophrenia* is by far the commonest type of psychosis in Nyasaland and that epileptic psychosis comes second but a long way being *schizophrenia*. With so few hospitals in the country the after care and treatment of epileptic psychotics is a problem, as few of them live near enough a hospital to continue the necessary daily treatment by drugs and it would be asking for trouble to hand over to patients or their relatives a quantity of phenobarbitone. However, it was possible during the year to arrange for the out-patient treatment of four epileptic cases at hospitals near to their homes.

A distinguished medical visitor to the Protectorate recently expressed satisfaction upon finding a Medical Officer willing to refute the statement that General Paralysis of the Insane does not occur amongst Africans. It is surprising that this hoary belief maintains itself and it is perhaps opportune in an Annual Report to kill it by stating that four clinical cases of G.P.I. were admitted during 1952. One was confirmed in the post mortem room and two had typical reaction of the cerebrospinal fluid including the paretic response to Lange's gold colloid reaction. The fourth case, who had been repatriated from a neighbouring country as a *senile dementia*, was clinically in an advanced stage of the disease. It proved impossible to get a specimen of his cerebrospinal fluid but he improved sufficiently under treatment to the extent of becoming "house trained" although remaining very demented. One of the proved cases had a persistently negative blood Kahn before treatment. Only two gave a history of syphilis, both ex-soldiers who had been infected ten years before admission. One of them, who was admitted in an early stage of the disease, was discharged cured. The other one had, amongst his many delusions of grandeur, a somewhat unusual one. Apparently he had had some trouble with the Police a year before, probably as a result of his disease, and was imprisoned for one month. He informed the Medical Officer that he got his own back, however, by having the "Bwana Judge" sacked.

During 1952 it became increasingly evident that an important cause of delay in the improvement of patients was the "old Asylum" itself. Not infrequently patients would improve and a cure would be expected, then for no apparent reason improvement ceased. They remained temperamental rather like psychopaths and failed to reach the stage when it was deemed safe to send them to the Annexe of the hospital where patients are completely free during the day. Pressure on accommodation, which has been mentioned earlier, forced the Medical Officer to take risks in sending patients to the Annexe and it was found that the results almost invariably justified the risks. At the old, prison-like asylum it is impossible to provide conditions suitable to the state of mind of each patient. The "mummies", the aggressives, the noisy and overactive are all mixed up in the yard and, while those who are improving are outside working a good part of the day, the time spent within the walls is sufficient to prevent some patients from maintaining progress.

As was mentioned in the Annual Report for 1951, the patients call the Annexe, the "village", and in this lies the probable explanation of the good effect of the Annexe and the bad effects of the old asylum. The male African in his village uses his hut as a bedroom only and his sitting room is out of doors. This is exactly the position at the Annexe where the patient sleeps in his room or ward but lives outside all day long doing the things he would do if he were in his village. It is perhaps providential that the layout of the new hospital, now nearing completion, is not built upon a European model but on a pavilion system, each pavilion having a very large grass covered tree-planted yard so that patients can live out of doors.

The good effect of attempting to approach a village setting for patients was also well shown during the year by an experiment made with the female patients whose life up till now has been even more unnatural than that of the male patients. An ordinary wattle and daub hut-with a fenced, in yard, was built for use as a kitchen outside the female block and cooking pots were provided. All food for the female patients is now cooked in the hut by the women themselves and as they are good foragers for edible plants their diet has been enriched by many extras. As a result of being allowed to live under conditions approximating to village conditions the women are more contented and this is reflected in their physical condition, all of them except one gaining weight during the year. Despite the fact that there will be steam cooking at the new hospital it is proposed to exempt the women from it and they will continue to cook and eat their meals a la "mudzi".

During the year 70 per cent. of all patients gained an average of 9.2 lbs. in weight, 22 per cent. lost an average of six lbs. and 8 per cent. remained stationary. The overall gain in weight was an average 5.1 lbs. per patient compared with 6.2 lbs. in 1951. It will be difficult to improve upon the 1951 figures as that year saw the beginning of the full time medical care of patients and the initial improvement was naturally great.

There were no cases of Pellagra during the year. A few early cases of vitamin A deficiency were observed amongst patients who are so withdrawn and apathetic that they take no interest in their food. In a well-run hospital no vitamin deficiencies should occur, but it is difficult to get untrained staff to report when patients go off their food or fail to get their beans and green food or spit out their codliver oil or red palm oil. Some patients require to be brought into the sick bay at regular intervals to ensure that they eat all their food, swallow their medicines and so keep in condition.

OCCUPATIONAL THERAPY

With the retirement of Mr. Fox, who was a trained social worker, no new ground has been broken in the sphere of occupational therapy and it has not been possible to put into effect the scheme for a day school using educated patients as teachers. (Some of them are ex-school teachers.) Educated Africans, until age teaches them some sense, are unfortunately not fond of manual work and educated mental patients are many degrees worse in this respect, but it was hoped that it would be possible to make use of their talents to teach others. Apart from agricultural work, making sisal mats and basket-weaving continue to be the main forms of occupational therapy. In both cases the processes start from cutting down the sisal and bamboos and, as the various stages in producing the final article grow more intricate, so the work can be graded to the powers of concentration of each patient.

The system of payment to patients for work done is proceeding smoothly although the accounting side of this banking venture is tiresome. The balance of funds credited to the patients' account with Government totalled £140-2s-8d at the end of the year. Every patient, except the few admitted and discharged with the period of a 30-day order, was discharged with some money in his pocket. Monthly payments for work done amounted to £109-8s-2d in the year and of this amount £49-12s-0d was spent on sundry purchases by individual patients. Sugar, scented soap and tobacco are still the main purchases. Throughout the year an average of 70 patients were working each month. This represents 47 per cent. of the inmates.

All patients able to do so undertake paid work for the hospital in the mornings. Those who are fit to do so may, if they wish, work on their own behalf in the afternoon. In practice the patients whose mental condition is approaching normal, usually work for themselves in the afternoon and most make a good profit by selling their produce. Some of their credit balances reach double figures, the highest at the moment being £17. In this connection, bricklaying, formerly the most highly paid work available, is no longer a coveted calling, as the destructive tendencies of patients has been reduced to the extent that repairs to brick work are now seldom necessary.

ENTERTAINMENTS

The library of gramophone records has been improved by the addition of 60 Bantu records, many of them recorded in Chinyanja. As a result recitals are much more popular and closing down correspondingly difficult.

TREATMENT

No notable advances can be reported but, taking advantage of the finding that the "Asylum" itself is a factor in retarding the cure of patients, an effort was made to get as many as possible of the patients who annoy the others outside the walls during the day. Orators and preachers as a class do well outside. They are generally so full of themselves and their ideas to reform the world that inside they are a menace to others and often suffer physically themselves. Outside, they are quieter for lack of an audience and, if they feel compelled to orate, trees and shrubs have the merit of not answering back or of retaliating physically. The hospital's most persistent preacher now demands to get out because, as he explains, he is not kicked by his colleagues when outside.

As was mentioned in last year's Report, electric convulsive therapy has only a limited usefulness in the absence of cases of depression, particularly involutional melancholia. Out of 52 admissions, 24 were selected for treatment by this method with the following results:—

<i>Rapid</i>		<i>Good</i>		<i>Slight</i>		<i>No</i>		<i>Bad</i>
<i>cure</i>		<i>effect</i>		<i>improvement</i>		<i>effect</i>		<i>effect</i>
3	..	4	..	6	..	7	..	4

Table VIIIa. Return of Diseases and Deaths (European In-patients) for the year 1952

Diseases	Remain- ing at the end of 1951	Admissions during 1952	Total cases treated	Deaths	Remain- ing at the end of 1952
<i>1-44. Infectious and parasitic diseases.</i>					
1. (a) Typhoid fever	1	2	3	—	—
(b) Type undefined	—	1	1	—	—
3. Typhus fever (tick)	—	9	9	—	1
4. Relapsing fever	—	8	8	—	—
7. Measles	—	2	2	—	—
9. Whooping cough	—	1	1	—	—
11. Influenza	—	6	6	—	—
13. Dysentery	—	—	—	—	—
(a) Amoebic	1	10	11	—	2
(b) Bacillary	1	14	15	1	—
(c) Unclassified	—	8	8	—	—
38. Malaria :—	—	—	—	—	—
(a) Benign Tertian	—	22	22	—	—
(b) Subtertian	—	32	32	—	—
(c) Unclassified	1	128	129	2	—
44-6a. Blackwater fever	—	1	1	1	—
42. Schistosomiasis	—	5	5	—	—
15, 19, 20, Other infectious and/or parasitic 36, 43, 44. diseases	—	4	4	—	—
45-55. Cancer and other tumours.	—	—	—	—	—
(a) Malignant	—	5	5	—	—
(b) Non-malignant	—	3	3	—	—
56-69. Rheumatism, Diseases of Nutrition and Endocrine glands and other diseases.	—	—	—	—	—
56-57. Rheumatic conditions	—	16	16	—	—
62 Pellagra	—	5	5	—	—
58-69, Other diseases :—	—	—	—	—	—
64. (a) Nutritional	—	2	2	—	1
65-69. (b) Endocrine glands and general	—	2	2	—	—
70-74. Diseases of the blood and blood- forming organs	—	24	24	—	—
75-77. Acute and Chronic Poisoning ...	—	5	5	1	—
78-89. Diseases of the Nervous System and Sense Organs.	—	—	—	—	—
82. Cerebral haemorrhage	—	4	4	1	—
78-81, Other diseases of the nervous 83-87. system	—	16	16	—	—
88. Trachoma	—	1	1	—	—
88. Other diseases of the eye, and annexa	2	10	12	—	—
89. Diseases of the ear and mastoid sinus	—	14	14	—	—
90-103. Diseases of the Circulatory System.	—	—	—	—	—
90-95. (a) Heart Diseases	—	11	11	2	—
(b) Other circulatory diseases ...	—	33	33	—	—
104-114 Diseases of the respiratory system—	—	—	—	—	—
106 Bronchitis :—	1	19	20	—	—
107 (a) Broncho-pneumonia	1	7	8	—	—
(b) Otherwise defined	—	6	6	—	—
104-105, Other diseases of the respiratory 110-114 system	1	26	27	—	1
Carried forward	9	462	470	8	5

Table VIIIa. Return of Diseases and Deaths (European In-patients) for the year 1952

Diseases		Remain- ing at the end of 1951	Admis- sions during 1952	Total Cases treated	Deaths	Remain- ing at the end of 1952
<i>Brought forward</i>		9	462	470	8	5
115-129	<i>Diseases of the digestive system—</i>					
119-120	<i>Diarrhoea and enteritis—</i>					
	(a) Under 2 years of age ..	1	7	8	—	—
	(b) Over 2 years of age ..	—	31	31	—	1
121	Appendicitis	2	32	34	—	—
122	Hernia, intestinal obstruction ..	—	8	8	—	1
125-127	Other diseases of the liver and biliary passage	—	21	21	—	1
115-118, 123-128 129	Other diseases of the digestive system	—	151	151	—	2
130-139	<i>Non-venereal diseases of the genito- urinary system—</i>					
130-132	<i>Nephritis (all forms)—</i>					
	(a) Acute	—	4	4	—	—
133-139	Other non-venereal diseases of the genito-urinary system ..	—	50	50	—	1
140-150	<i>Diseases of pregnancy, Child-birth and the puerperal state—</i>					
140-142	(a) Abortion	—	23	23	—	—
	(b) Ectopic gestation	—	1	1	—	—
145-147	(c) Toxaemias of pregnancy ..	—	4	4	—	—
148-158, 150	Other conditions of the puer- peral state	—	113	113	—	1
151-156	<i>Diseases of the skin, cellular tissue, bones and organs of locomotion</i>	9	69	78	—	2
157-161	<i>Congenital malformations and diseases of early infancy</i>	—	7	7	—	—
162	<i>Senility</i>	—	1	1	—	—
163-198	<i>External Causes—</i>					
172-198	Other forms of violence ..	2	69	71	1	—
199-200	<i>Ill-defined diseases</i>	1	128	129	1	2
TOTALS ..		24	1,181	1,205	10	16

Table VIIIb. Return of Diseases and Deaths (African In-patients) for the year 1952 (including Asiatics, African Officials, K.A.R. African Ranks, African General Population, Asiatic and African Convicts)

Diseases				Remain- ing at the end of 1951	Admis- sions during 1952	Total Cases treated	Deaths	Remain- ing at the end of 1952
1-44	<i>Infectious and Parasitic diseases</i>							
1	(a)	Typhoid fever	.. ..	—	16	16	3	—
	(b)	Paratyphoid fever	.. ..	1	—	1	—	—
	(c)	Type undefined	.. ..	—	—	—	—	—
3		Typhus fever	.. ..	—	3	3	—	—
4		Relapsing fever	.. ..	3	203	206	5	5
5		Undulant fever	.. ..	—	1	1	—	—
6		Smallpox	.. ..	—	1	1	—	—
7		Measles	.. ..	5	130	135	1	—
8		Scarlet fever	... ..	—	7	7	—	—
9		Whooping-cough	.. ..	27	291	318	3	1
10		Diphtheria	.. ..	—	13	13	4	—
11		Influenza	.. ..	—	51	51	—	—
12		Cholera	.. ..	—	—	—	—	—
13	<i>Dysentery—</i>							
	(a)	Amoebic	.. ..	2	121	123	—	1
	(b)	Bacillary	.. ..	1	61	62	3	2
	(c)	Unclassified	.. ..	—	33	33	2	1
16		Acute poliomyelitis	.. ..	—	6	6	—	—
17		Encephalitis lethargica	.. ..	—	1	1	1	—
18		Cerebro-spinal fever	.. ..	1	21	22	8	—
21		Rabies	.. ..	—	—	—	—	—
22		Tetanus	.. ..	—	16	16	8	1
23		Tuberculosis of the respiratory system	.. ..	23	281	304	35	26
24-32		Other tuberculous diseases	.. ..	10	124	134	6	5
33		Leprosy	.. ..	2	117	119	—	10
34-35	<i>Venereal Diseases—</i>							
	(a)	Syphilis	.. ..	47	1,148	1,195	19	55
	(b)	Gonorrhoea	.. ..	8	594	602	—	10
	(c)	Other venereal disease	.. ..	—	6	6	—	—
37		Yellow Fever	.. ..	—	—	—	—	—
38	<i>Malaria—</i>							
	(a)	Benign tertian	.. ..	4	111	115	5	3
	(b)	Subtertian	.. ..	36	1,816	1,852	56	37
	(c)	Quartan	.. ..	—	47	47	1	—
	(d)	Cachexia	.. ..	1	135	136	—	3
	(e)	Unclassified	.. ..	61	2,648	2,709	31	64
44-6a		Blackwater fever	.. ..	—	3	3	—	—
39		Kala-azar	.. ..	—	—	—	—	—
39		Trypanosomiasis	.. ..	—	11	11	2	1
39		Yaws	.. ..	3	90	93	—	4
39		Other protozoal diseases	.. ..	—	—	—	—	—
40		Ankylostomiasis	.. ..	53	2,088	2,141	6	72
42		Schistosomiasis	.. ..	53	993	1,046	2	32
41-42		Other helminthic diseases	.. ..	1	192	193	3	6
15, 19, 20		Other infectious and/or parasitic diseases	.. ..	1	161	162	3	3
45-55	<i>Cancer and other tumours</i>							
	(a)	Malignant	.. ..	7	137	144	32	2
	(b)	Non-malignant	.. ..	9	188	197	2	5
	(c)	Undetermined	.. ..	—	7	7	—	—
56-69	<i>Rheumatism, diseases of nutrition and Endocrine glands and other general diseases—</i>							
56-57		Rheumatic conditions	.. ..	9	364	373	—	14
59		Diabetes	.. ..	1	7	8	—	1
60		Scurvy	.. ..	—	9	9	—	—
61		Beriberi	.. ..	—	6	6	—	—
62		Pellagra	.. ..	—	29	29	2	1
58, 63, 64	<i>Other diseases—</i>							
	(a)	Nutritional	.. ..	—	9	9	—	—
65-69		Endocrine glands and general	.. ..	—	39	39	—	—
<i>Carried forward</i>				369	12,335	12,704	243	365

Table VIIIb. Return of Diseases and Deaths (African in-patients) for the year 1952 (including Asiatics, African officials, K.A.R. African Ranks, African and General Population, Asiatic and African Convicts)

Diseases	Remain- ing at the end of 1951	Admissions during 1952	Total cases treated	Deaths	Remain- ing at the end of 1952
<i>Brought forward</i>	369	12,335	12,704	243	365
70-74. <i>Diseases of the Blood and blood- forming organs</i>	14	158	172	14	7
75-77. <i>Acute and chronic poisoning</i> ..	—	19	19	3	—
78-89. <i>Diseases of the nervous system and Sense organs—</i>					
82. Cerebral haemorrhage.. ..	4	78	82	4	6
78-81. Other diseases of the nervous system	9	190	199	12	3
88. Trachoma	2	18	20	—	2
88. Other diseases of the eye and adnexa	36	1,086	1,122	—	38
89. Diseases of the ear and mastoid sinus	1	196	197	2	5
90-103. <i>Diseases of the circulatory system—</i>					
90-95. (a) Heart diseases	3	100	103	19	5
(b) Other circulatory diseases ..	4	147	151	4	6
104-114. <i>Diseases of the Respiratory System.</i>					
106. Bronchitis	11	1,061	1,072	21	19
107. Pneumonia :					
(a) Broncho-pneumonia	9	409	418	60	9
(b) Lobar-pneumonia	8	810	818	38	9
(c) Otherwise defined	5	123	128	8	7
104-105, Other diseases of the Respiratory 110-114. System	5	309	314	5	8
119-120. Diarrhoea and enteritis :—					
(a) Under 2 years of age	3	181	184	8	8
(b) Over 2 years of age	4	148	152	1	6
121. Appendicitis	—	43	43	—	—
122. Hernia, intestinal obstruction ..	5	213	218	14	7
124. Cirrhosis of the liver	2	30	32	11	—
125-127. Other diseases of the liver and biliary passage	3	122	125	9	—
115-118, Other diseases of the Digestive 123-128, System	9	911	920	21	29
129.					
130-139. <i>Non-Venereal diseases of the Genito- Urinary System.</i>					
Nephritis (all forms)—					
130 (a) Acute	1	21	22	4	3
131 (b) Chronic	2	31	33	2	—
(c) Not stated to be acute or chronic	—	10	10	4	—
133-139. Other non-venereal diseases of the Genito-Urinary system ..	29	836	856	12	43
140-150. <i>Diseases of Pregnancy, Child-birth and the puerperal state.</i>					
140-141. (a) Abortion	2	183	185	1	4
142. (b) Ectopic gestation	—	2	2	—	—
145-147. (c) Toxaemias of pregnancy ..	40	51	91	1	2
143, 144, (d) Other conditions of the puerperal 148-150. state	—	2,556	2,556	51	32
151-156. <i>Diseases of the Skin, Cellular Tissues, Bones and Organs of Locomotion</i>	160	5,341	5,501	26	210
157-161. <i>Congenital Malformations and diseases of early infancy.</i>					
157. (a) Other Congenital Malforma- tion	—	14	14	—	—
158. (b) Congenital debility (children under 1 year.	2	22	24	2	—
<i>Carried forward</i>	742	12,754	28,496	600	833

Table VIIIb. Return of Diseases and Deaths (African In-patients) for the year 1952. (Including Asiatics, African Officials, K.A.R. African Ranks, African and General Population, Asiatic and African Convicts)

Diseases				Remain- ing at the end of 1951	Admissions during 1952	Total cases treated	Deaths	Remain- ing at the end of 1952
<i>Brought forward</i>				742	27,754	28,496	600	833
159.	(c)	Premature birth under 1 year ... ..	...	—	15	15	3	—
161.	(d)	Other diseases peculiar to early infancy ... ..	...	—	8	8	2	—
162.		Senility ... ..	...	1	13	14	2	—
163–198. <i>External Causes.</i>								
163–171.	(a)	Suicide ... ..	...	—	—	—	—	—
172–198.	(b)	Other forms of violence ... ..	...	172	3,732	3,940	75	175
199–200.		Ill-defined diseases ... ..	...	66	1,454	1,520	26	42
TOTALS				981	32,976	33,957	708	1,050

Table IXa. Return of Diseases (European Out-patients) for the year 1952

<i>Diseases</i>			<i>Diseases</i>		
	<i>Males</i>	<i>Females</i>		<i>Males</i>	<i>Females</i>
1-44. <i>Infectious and parasitic Diseases.</i>			Brought forward ...	373	191
1-2. Enteric Group :—			56-69. <i>Rheumatism, diseases of Nutrition and Endocrine Glands and other general diseases.</i>		
(a) Typhoid Fever ...	—	—	56-57. Rheumatic conditions	65	52
(b) Type undefined ...	7	—	59. Diabetes ...	6	—
3. Typhus fever ...	1	1	60. Scurvy ...	2	—
4. Relapsing Fever ...	—	—	62. Pellagra ...	—	3
6. Smallpox ...	2	—	Other diseases—		
7. Measles ...	6	2	58, 63, 64. (a) Nutritional	3	1
8. Scarlet fever ...	—	—	65, 69. (b) Endocrine glands and general ...	2	6
9. Whooping cough ...	10	5	<i>Diseases of the Blood and Blood-forming Organs</i> ...	12	59
10. Diphtheria ...	2	2	75-77. Acute & Chronic Poisoning ...	4	1
11. Influenza ...	20	7	78-89. <i>Diseases of the Nervous System and Sense Organs.</i>		
13. Dysentery—			82. Cerebral haemorrhage	5	—
(a) Amoebic ...	7	—	78, 81, Other diseases of the		
(b) Bacillary ...	5	6	83, 87. Nervous System ...	18	10
(c) Unclassified ...	33	6	88. Other diseases of the eye and adnexa ...	84	61
16. Acute poliomyelitis ...	4	—	89. Diseases of the ear and mastoid sinus ...	118	62
18. Cerebrospinal fever ...	—	—	90-103. <i>Diseases of the Circulatory System.</i>		
22. Tetanus ...	—	—	90-95. (a) Heart diseases	5	2
23. Tuberculosis of the Respiratory System	—	—	96-103. (b) Other circulatory diseases ...	73	29
24-32. Other tuberculous diseases ...	—	—	104-114. <i>Diseases of the Respiratory System.</i>		
33. Leprosy ...	—	—	106. Bronchitis ...	82	63
34-35. Venereal Diseases :—			107-109. Pneumonia :—		
(a) Syphilis ...	—	—	(a) Broncho-pneumonia	4	2
(b) Gonorrhea ...	4	—	(b) Lobar-pneumonia	5	1
(c) Other venereal diseases ...	—	—	110-114. Other diseases of the Respiratory System ...	150	95
38. Malaria.			115-119. <i>Diseases of the Digestive System.</i>		
(a) Benign tertian ...	5	2	119-120. Diarrhoea and Enteritis :—		
(b) Subtertian ...	33	18	(a) Under 2 years of age	32	27
(c) Cachexia ...	—	—	(b) Over 2 years of age	106	64
(d) Unclassified ...	137	58	Carried forward ...	1,149	729
44-6a. Blackwater fever ...	1	—			
39. Other Protozoal Diseases	1	—			
40. Ankylostomiasis ...	1	2			
42. Schistosomiasis ...	7	2			
41-42. Other Helminthic diseases ...	16	29			
15, 19, 20, 36, 40, 43, Other infectious and/or parasitic diseases	43	35			
45-55. <i>Cancer and other Tumours.</i>					
(a) Malignant ...	7	2			
(b) Non-malignant ...	21	12			
(c) Undetermined ...	—	2			
Carried forward ...	373	191			

Table IXb. Return of Diseases (African Out-patients) for the year 1952 (including Asiatics, African Officials, K.A.R. African Ranks and African Convicts)

	<i>Diseases</i>	<i>Males</i>	<i>Females</i>
1-44.	<i>Infectious and parasitic Diseases</i>		
1-2	(a) Typhoid fever	11	5
	(b) Paratyphoid fever	—	—
	(c) Type undefined	—	—
3	Typhus fever	—	—
4	Relapsing fever	237	107
5	Undulant fever	1	—
6	Smallpox	2	—
7	Measles	137	114
8	Scarlet fever	—	—
9	Whooping-cough	406	491
10	Diphtheria	3	4
11	Influenza	251	88
12	Cholera	—	—
13	<i>Dysentery—</i>		
	(a) Amoebic	154	53
	(b) Bacillary	84	31
	(c) Unclassified	152	54
14	<i>Plague—</i>		
16	Acute Poliomyelitis	4	2
17	Encephalitis lethargica	1	—
18	Cerebrospinal fever	18	2
21	Rabies	—	—
22	Tetanus	11	13
23	Tuberculosis of the respiratory system	200	80
24-32	Other tuberculous diseases	108	48
33	Leprosy	347	160
34-45	<i>Venereal Diseases—</i>		
	(a) Syphilis	3,683	2,884
	(b) Gonorrhoea	2,085	829
	(c) Other venereal diseases	11	16
37	Yellow fever	—	—
38	<i>Malaria—</i>		
	(a) Benign tertian	233	293
	(b) Subtertian	3,997	3,241
	(c) Quartan	1,118	348
	(d) Unclassified	19,395	11,107
44-6a	Blackwater fever	2	—
39	Kala-azar	—	—
39	Trypanosomiasis	7	4
39	Yaws	129	132
39	Other protozoal diseases	—	—
40	Ankylostomiasis	5,179	3,713
42	Schistosomiasis	7,454	3,007
41, 42	Other helminthic diseases	813	462
15, 19, 20	Other infectious and/or parasitic		
36, 43, 44	diseases	598	313
45-55	<i>Cancer and other tumours—</i>		
45-53	(a) Malignant	80	53
54	(b) Non-malignant	229	146
55	(c) Undetermined	10	6
56-69	<i>Rheumatism, diseases of nutrition and endocrine glands and other general diseases—</i>		
56-57	Rheumatic conditions	6,517	3,755
59	Diabetes	6	2
60	Scurvy	6	8
61	Beriberi	4	3
62	Pellagra	77	59
58, 63, 64	<i>Other diseases—</i>		
	(a) Nutritional	325	8
	(b) Endocrine glands and general	35	33
75-77	Acute and chronic poisoning	12	7
	<i>Carried forward</i>	54,132	31,681

Table IXb. Return of Diseases (African Out-patients) for the year 1952 (including Asiatics, African Officials, K.A.R. African Ranks and African Convicts)

<i>Diseases</i>						<i>Males</i>	<i>Females</i>
<i>Brought forward</i>						54,132	31,681
<i>Diseases of the nervous system and sense organs—</i>							
82	Cerebral haemorrhage	..	..	..	..	71	19
78-81, 83-87	Other diseases of the nervous system	..	..	..	..	1,262	540
88	Trachoma	..	..	..	..	51	28
88	Other diseases of the eye and adnexa	..	..	..	..	10,744	8,418
89	Diseases of the ear and mastoid sinus	..	..	..	..	5,461	3,137
90-103	<i>Diseases of the circulatory system—</i>						
90-95	(a) Heart diseases	..	..	..	..	93	26
96-103	(b) Other circulatory diseases	..	..	..	..	341	156
104-114	<i>Diseases of the respiratory system—</i>						
106	Bronchitis	..	..	..	..	19,038	10,711
107-109	<i>Pneumonia—</i>						
	(a) Broncho-pneumonia	..	..	..	..	272	237
	(b) Lobar-pneumonia	..	..	..	..	486	284
	(c) Otherwise defined	..	..	..	..	178	33
104-105, 110-114	Other diseases of the respiratory system	..	..	..	..	21,341	6,813
115-129	<i>Diseases of the digestive system—</i>						
119-120	<i>Diarrhoea and enteritis—</i>						
	(a) Under two years of age	..	..	..	..	2,108	1,361
	(b) Over two years of age	..	..	..	..	1,704	1,171
121	Appendicitis	..	..	..	..	4	10
122	Hernia, intestinal obstruction	..	..	..	..	220	10
124	Cirrhosis of the liver	..	..	..	..	27	5
125-127	Other diseases of the liver and biliary passage	..	..	..	..	110	64
115-118	Other diseases of the digestive	..	..	..	..
123, 128, 129	system	..	..	..	..	28,804	15,024
130-139	<i>Non-venereal diseases of the genito-urinary system—</i>						
130-132	<i>Nephritis (all forms)—</i>						
130	(a) Acute	..	..	..	..	21	23
131	(b) Chronic	..	..	..	..	23	10
133-139	Other non-venereal diseases of the genito-urinary	..	..	..	..
	system	..	..	..	..	1,192	916
140-150	<i>Diseases of pregnancy, child-birth and the puerperal state—</i>						
140, 141, 142	(a) Abortion	..	..	..	..	—	194
	(b) Ectopic gestation	..	..	..	..	—	5
145-147	(c) Toxaemias of pregnancy	..	..	..	..	—	131
143, 144, 149, 150	(d) Other conditions of the puerperal state	..	..	..	..	—	2,933
151-156	<i>Diseases of the skin, cellular tissue, bones and organs of locomotion—</i>						
	..	..	..	..	..	57,486	20,874
157-161	<i>Congenital malformations and diseases of early infancy—</i>						
	..	..	..	..	..	—	15
158	(a) Congenital debility (children under 1 year)	..	..	..	..	33	19
159	(b) Premature birth (children under 1 year)	..	..	..	..	1	13
160	(c) Injury at birth (children under 1 year)	..	..	..	..	8	1
162	Senility	..	..	..	..	18	—
163-198	<i>External causes—</i>						
163-171	(a) Suicide	..	..	..	..	—	—
172-198	(b) Other forms of violence	..	..	..	..	46,359	13,251
199-200	Ill-defined	..	..	..	..	14,643	6,304
TOTALS						266,231	124,417

